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THE INFLUENCE OF DIET IN SKIN DISEASES*

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Our meager knowledge of nutrition is appreciated by all physicians, perhaps more so because we realize that diet is the most important therapeutic aid to prevent and combat disease. In recent years the information obtained by investigation in physiology and biological chemistry, as well as food experiments on the lower animals, has shed considerable light on the requirements of nutrition, thereby enabling us to prescribe a diet more on the basis of reasoning rather than following custom and tradition.

There is no doubt that the majority of cutaneous disorders are greatly influenced by diet, and depend upon the state of the alimentary canal for their development and maintenance.

However, it must be borne in mind that we can only lay down certain general principles in this connection, because different people vary so much in their susceptibilities. One individual cannot eat pork without an outbreak of hives; another will have a scarlatiniform eruption after eating strawberries; a third suffers with pruritus after the ingestion of coffee or tea, and more recently synthetic gin has been a frequent offender.

The adequate diet is fairly complex chemically, and it is necessary to consider the diet as a whole and not advocate a diet based on one or two nutrient principles, especially if the diet is to be prescribed for any lengthy period.

We can prevent ourselves from falling victims to dietetic fads and satisfy our own hobbies, if we will keep the basic requirements of nutrition in mind. For individual cases it is well to consider the general requirements of a normal diet.

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Practically all of the rules necessary are outlined by Taylor, as follows:

(a) The maintenance of nitrogenous equilibrium.

(b) Energy bearing foods sufficient to maintain the caloric equilibrium under the individual's conditions of life.

(c) Certain fresh or raw foods.

(d) A certain percent of vegetable fiber.

(e) Various salts needed by the body.

(f) Certain flavoring materials that stimulate the secretion of gastric juice.

(g) Reasonable demands of taste and bulk.

In the aggregate, by far the most important effects of faulty nutrition are the results of errors of one kind or another, which has gradually undermined the general health.

It is one of the causes of inferiority of physical development, fatigue, instability of the nervous system, lack of endurance and resistance to infections, particularly tuberculosis and tuberculoid eruptions, where specific immunity is not easily developed by the body.

There are certain morbid conditions which call for dietetic aid, that are encountered coincidently with the dermatoses we are called upon to treat. Quite often the adjustment of the diet is indicated for the morbid state present rather than the disease of the skin. Among these conditions are anemia, anaphylaxis, acidosis, constipation, obesity, fatigue, hypertension and hypotension.

The proper amount of consideration should be given to the individual's age, physical condition, occupation, habits of life, season of the year, as well as the patient's likes and dislikes.

In infancy and childhood, most cases of eczema respond to a reduction of carbohydrates and fats. In older individuals,

there is usually a constant improvement after the limitation of the nitrogenous food in the diet.

For convenience, I have classified foods in seven groups:

1. Those to avoid when in doubt:
   a. Alcohol.
   b. Tea, coffee and cocoa.
   c. Fried food.
   d. Spices and highly seasoned dishes.
   e. Rich pastries.

We know that the above named foods have various influences, many of a reflex nature on cutaneous lesions. Foods which are gratifying to the palate are frequently partaken of to excess and produce flatulence, ptosis and indigestion.

2. Those that will produce a disorder of the skin as, acute urticaria, angioneurotic edema, eczema, pruritus and many forms of toxic erythema in allergic individuals.

In infants the most common allergic foods are cow's milk, eggs, oatmeal, wheat, rice, and tomatoes. In adults the usual sensitizing foods are shell fish, fruits, particularly strawberries, nuts, pork, buckwheat and tomatoes.

When a common food is the sensitizing agent, the cutaneous eruption is chronic in type and more acute and of short duration if the offending food is uncommon in the diet. Many individuals who are sensitive to certain foods, and react positively by cutaneous tests will not receive beneficial results by removal of the sensitizing agent from the diet. Good examples are tuna fish and cheese.

Duke explains this anomaly by the sensitiveness occurring to the combination of several foods, and often digestive or putrifactive changes common to several foods.

In my limited experience the cutaneous food tests have revealed the etiological factor in a much smaller percentage of cases of infantile eczema than that reported by many investigators.

I believe that an excess of fat or carbohydrates in the diet is more frequently the cause, rather than sensitizing foods.

In eczema in adults, the value of the cutaneous food test has been almost nil.

Lichen urticatus, which resembles eczema more than urticaria, is regarded as an allergic disorder. The sensitizing foods are usually listed as eggs, tomatoes, sea food, cheese, nuts, pork, and etc.

These cases are very common in Philadelphia, but, up to the present time, I have never seen one in Oklahoma. If my observation is correct, there must be some other factors to consider.

3. Skin diseases provoked or maintained by an excess of carbohydrates.

The literature discloses many contradictory reports of the blood sugar determinations in many dermatoses. However, all agree on the high sugar content of the blood and beneficial results obtained from a low carbohydrate diet in all cutaneous manifestations of diabetes, as: pruritus, carbuncles, furuncles, eczematoid eruption and xanthoma.

Highman and others reported a hyperglycemia in a majority of cases and sycosis vulgaris, seborrheic dermatitis, and acne vulgarus, the indurated type invariably high.

Folin showed that thirty minutes after the injection of dextrose into guinea pigs, the skin contained almost as much sugar as the blood.

Usher and others have shown that human sweat is an excellent culture media for certain bacteria, particularly certain types of fungi. It has been further shown that bacterial growth in sweat varies directly with its sugar content. It is believed possible with certain individuals with a disturbed carbohydrate metabolism, pathogenic organisms, normally present on the skin surface become activated and exert effects. These investigations substantiate Darier's views of the etiology of acne vulgaris and seborrhea.

The etiologic factors, according to Darier, are sexual development and errors in diet, in which excessive carbohydrates, stimulants, mastication and constipation all play a part.

He believes that the acne bacillus which he always found in acne vulgaris lesions, and the microbacillus of Unna which were invariably found in seborrheic lesions, owe their activity and pathological effect mainly to the soil which is probably dependent on excessive carbohydrate ingestion or possibly the low carbohydrate tolerance of the individual.

Sutton reported gratifying results with liver extract in chronic furunculosis and

acne vulgaris, particularly the deep seated lesions of the indurated type.

Warthin noted benefit from liver feeding in chronic pyogenic disorders of the skin. Blotner and Murphy investigated the effect of liver feeding on the blood sugar in 19 cases of diabetes. Their findings suggest a sugar reducing substance in liver similar to the effect of insulin on the blood.

Relapses of eruption of a seborrheic background following the ingestion of excessive amounts of carbohydrates are too frequent to be a coincidence.

To quote Schamberg, such symptoms as, a frequent headache, "lack of pep," a tired feeling in the morning, floating specks before the eyes and cold hands and feet, suggest starch intolerance and when accompaning a complaint of "itching," make the diagnosis of autointoxication tenable.

4. Dermatoses produced or maintained by an excess of nitrogen intake.

Eczema has been frequently observed to be associated with gout and an excess of uric acid in the blood. Whether the excess of uric acid in the blood is the cause or the result of eczema and pruritus, has not been definitely determined.

Wise believes that the uric acid content of the tissues is increased and osmotic changes produce the redness, swelling and exudations. Several years ago, Schamberg and Brown published the uric acid determinations of the blood in 161 cases of eczema and 10 cases of pruritus; the uric acid content was above 3.7 mg. per 100 c.c. of blood, in 44 percent of the former and 50 percent of the latter.

In 1928, I studied the case records of several hundred cases of true eczema and severe or persistent pruritus in the private practice of Doctors Schamberg and Wright, of Philadelphia. The uric acid and urea determinations of the blood were above normal in 44 percent and 51 percent respectively of the cases studied.

I had the pleasure to observe the marked improvement in the general health as well as the disappearance of the cutaneous disorder in many of these cases, in which a diet was prescribed, avoiding red meats, internal organs and sweets, in conjunction with the usual therapeutic methods. The uric acid and urea were diminished in 72 percent of the cases.

There is little doubt concerning the value of the reduction of nitrogenous foods in the treatment of psoriasis. Shamberg and his associates found an excessive nitrogen retention in the blood, secretions, excretions and scales.

An old inveterate case of psoriasis in a man about fourty-five years of age, for seven years had been resistant to all methods of treatment as: irradiation, arsenic, chrysarobin, sodium salicylate, and etc., was placed in the hospital on a very low protein diet, consisting of five grams of nitrogen a day.

There was pronounced improvement in ten days and the eruption had practically disappeared at the end of the third week.

I do not think it advisable to restrict the diet so rigidly in most cases. Most all agree to the value of a diet in which all flesh food is eliminated, a restriction of other animal foods, nuts, and vegetables that have a relatively high nitrogen content, such as peas and beans, in the treatment of acute psoriasis. In acute stages, frequently chrysarobin, arsenic, X-ray or the ultra-violet rays will provoke a dermatitis which becomes the seat of a spreading psoriatic eruption.

In the acute stages of eczema and dermatitis, exfoliative, a low protein diet has been found to be distinctly beneficial.

5. Dermatoses influenced by an increased acidity of the blood.

There is considerable clinical evidence to suggest that all patients with eczema, seborrheic dermatitis and furunculosis, are suffering from a relative acidosis.

Fred Wise believes that the seborrheic state results from a diminution of the intake in their food of the fixed bases, that is the monosodium and disodium phosphates and carbonates, which are normally present in fresh fruits and vegetables, that are largely responsible for the maintenance of an exact alkaline acid equilibrium in the blood and tissue fluids.

6. Skin diseases due directly or indirectly to the action of foods on the sympathetic nervous system.

Acne rosacea is frequently associated with dvspepsia and flatulency, although not directly due to any one fault in the diet.

A great variety of influences, many of a reflex nature, are associated with it. These reflexes may be brought about directly through the action of stimulants or indirectly as a result of intestinal indigestion from excessive starchy food.

Rosacea is like psoriasis and eczema, in that no matter how little we may attach to the importance of diet as to cause, we must acknowledge the effect of regulation of the diet.

7. Skin disorders produced and maintained by a deficiency in the diet.

Pellagra is a good example, as it has been proven by Goldberger and others to be a purely vitamin deficiency disease due to an insufficient amount of fresh animal protein food.

The lack of resistance to infectious dermatoses as: impetigo, trichophytosis, sycosis vulgaris, may be caused by a vitamin deficiency, as experience of investigators of nutrition has been that their experimental animals on vitamin deficiency diets are far more likely to suffer from infections than are normally fed animals.

Possibly some of the cutaneous diseases of obscure origin, which are extremely serious, but fortunately rare, such as pemphigus, acute disseminating lupus erythematosis and pityriasis rubra, will eventually be proven to be due to some deficiency in the diet.

At present, nourishing foods and stimulants are considered the most valuable therapeutic means at our command to sustain life in most all serious affections of the skin.

CONCLUSIONS

1. In making adjustments of the diet, the essentials of nutrition must be remembered and the patient be considered, as well as the disease.

2. From a practical viewpoint, cutaneous food tests are of some value as removal of the food giving the positive cutaneous test may eradicate or cause improvement of the skin disorder.

3. An excess of carbohydrates particularly in individuals with a lowered carcosis vulgaris, may be caused by a vitamins in the diet, are two important etiologic factors in the production of an increased susceptibility to infections of the skin.

4. An animal free diet is indicated in the acute stages of psoriasis, eczema and exfoliative dermatitis. Old inveterate cases of psoriasis will respond to a very low nitrogen diet, when all other methods have failed.

5. Frequently, it is confusing to attempt to reconcile the theories of metabolism to the needs of the individual. However, in adjusting the diet in most dermatoses, especially the acute stage, much comfort may be found in the three simple rules of Brocq: eat sparingly; eat slowly; rest after meals.

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THE DIAGNOSIS AND TREATMENT OF URETERAL CALCULUS

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Since the advent of the X-ray and the cystoscope, remarkable strides have been made in the diagnosis and treatment of stones in the ureter. Previously, the diagnosis had to be made on the symptoms and physical findings alone and the treatment was an exploratory operation, with the hope of finding a calculus somewhere along the course of the ureter which was as often as not, not present. With the advent of the X-ray, many shadows, such as calcified glands and phleboliths were often mistaken for stones and the patient subjected to an unnecessary operation. Now, the combination of the X-ray and the cystoscope with ureteral catheterization and urography, has made the diagnosis almost an exact science. Then, through the work pioneered by Cromwell, Young, Kretschmer, Beer, Caulk, Walther and many others, brilliant results have been obtained in the non-operative removal of ureteral calculi so that now operation is the exception where previously it was the rule.

SYMPTOMS

A typical ureteral colic consists of a sudden, acute, violent, agonizing pain in the groin of the affected side which radiates down into the genitals or down the thigh. Red blood cells and often pus cells are found in the urine. All cases do not by any means present typical symptoms. Pain is by far the most consistent one and in the majority of cases it is colicky and radiating. It can be slight only, however, and dull aching in character. Frequency of urination is common and blood and pus cells in the urine also. There may be burning, urgency, and dysuria. Repeated examination of the urine reveals information of great value and may be the means of preventing an unnecessary abdominal operation. In severe attacks of ureteral colic, as in renal or gall-bladder colic, reflex nausea and vomiting are common symptoms. With renal infection and an impacted stone, there are often chills, high fever and prostration.

DIAGNOSIS

With the number of abdominal lesions which give symptoms of a colicky nature, it is of the greatest importance that renal and ureteral stones are not overlooked. Ample statistics prove that in these cases, approximately thirty percent have had a previous abdominal operation without relief. The appendix, of course, is first in the role of mistaken diagnoses, next, the female pelvic organs, then the gall-bladder. Right sided pain is particularly liable to a wrong interpretation. It is here that routine urinalysis is of the greatest value, for the finding of blood or pus or both in the urine must cause the surgeon to rule out the urinary tract before opening the abdomen. In the exact diagnosis of calculi, the X-ray and the cystoscope stand preeminent. The former will show about ninety percent of all stones, their size, number, shape and location. Ureteral catheterization and urography will eliminate such sources of error as calcified glands and phleboliths and will ascertain whether the stone is impacted, if the kidney is infected, its functional value and the amount of dilatation above the stone. Urography will aid in the diagnosis of soft stones which do not show on the plain plate. The X-ray plate should take in the whole genito-urinary tract, care being taken to include the symphysis pubis, as eighty percent of all stones are found in the lower third of the ureter.

TREATMENT

A great many patients pass ureteral calculi spontaneously, many without ever seeing a physician. Those stones which do not pass and which remain stationary in the ureter are much more liable to cause damage to the kidney than are renal stones. With a patient in an acute attack of ureteral colic, the first thing is to give him relief from the agonizing pain by hypodermics of morphine. Having obtained this relief, the thing that must be considered above all is whether the kidney will be damaged if the stone is not removed promptly. With a calculus impacted in the ureter, and uninfected urine, it is safe to attempt removal by cystoscopic manipulations. With a stone and infected urine, provided there is good drainage, the same process may be carried out, at the same time making frequent checks of the kidney function. With an impacted calculus and infected urine and complete blockage, with chills, and fever, if prompt results are not obtained by manipulation, operation must be resorted to without delay. Of course, the size of the stone has a great deal to do with its passage through the ureter. A small stone, under .3 cm. in diameter, will usually pass of itself or after simply passing a catheter by it up the ureter. A moderate sized stone, from .3 to .8 cm. in diameter, is usually passed following manipulation. A large calculus above .8 cm. in diameter, is often passed after cystoscopic treatment but it is more liable to require operative removal. Any stone that is firmly impacted and cannot be moved will require surgery. A calculus in the upper ureter can often be pushed back into the pelvis and drainage re-established, or a catheter can be passed by it into the kidney and allowed to remain several days to give drainage. The patient's general condition will improve greatly and the kidney may come back remarkably so that at operation it can be saved where several days previously removal would have appeared necessary. No stone should be removed by the knife until an attempt has been made to remove it cystoscopically. Urologists are confirmed optimists in this matter for they have seen too many large stones passed following manipulation. When calculi are multiple, an open operation will probably have to be done. Stones in the upper ureter are much more difficult to remove than those in the lower ureter by cystoscopic treatment. In the latter, under favorable conditions, this should be tried repeatedly before resorting to operation. Some patients react poorly to treatment and the passing of a catheter will cause a flare-up of an old kidney infection. In such cases, of course, surgery is indicated. Gradual dilation of the ureter up to 15 French and more, leaving one or more catheters in the ureter for a day or longer, the injection of glycerin, oil, or a local anesthetic, Walther's bougies, Howard's corkscrew bougie, Dourmashkin's bag and slitting the ureteral orifice with scissors or by fulguration are some of the methods used in non-operative treatment. Main reliance is placed on ureteral dilation with large bougies, using other methods as they seem indicated.

RESULTS

In reviewing forty-five cases seen in the past three years, it was found that in nine cases no treatment was instituted or treatment was stopped and the patient lost track of. In three, the stone was passed spontaneously and in three other cases it was pushed back into the pelvis and reconverted into a renal stone. Of the remaining

thirty cases, in twenty-six the stone was passed after various cystoscopic manipulations, and five required operative removal. In one case, one calculus was removed from one ureter by operation and one from the other by dilation which accounts for the apparent discrepancy in these figures. There were thus thirty-one stones, of which twenty-six or 84.9 percent were removed without operation, and five, or 16.1 percent required operation. In all of the surgical cases, the calculus measured one cm. in diameter or more. One stone, impacted in the upper ureter, required nephrectomy for pyonephrosis in addition. In eight cases, there was infection and in six, this cleared up after removal of the stone and in the other two it was greatly improved. One treatment alone was required in the majority of the cases but in a number many were given, the longest requiring eight months before the stone was finally passed. As long as the kidney appeared to be functioning well, cystoscopic treatments were given repeatedly, with the above results.

URINARY INCONTINENCE AND ITS SURGICAL TREATMENT*

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By urinary incontinence I mean uncontrollable escape of urine from the bladder due to an inability of the sphincter muscles to hold it back. Other causes may lead to an escape of urine without the consent or knowledge of the patient, as extreme exhaustion, diseases of the nervous system, ulcers in the bladder neck, overdistention of the bladder, etc. In each of these conditions, there is nothing wrong with the musculature of the bladder *per se*, and the patient is entirely continent provided he becomes otherwise well. Such conditions bring up a wide field for discussion and are not pertinent to the problem I am discussing; viz., what to do when the bladder muscles themselves cannot act because of faulty development or injury.

The ordinary conception of vesical sphincters is that there are two circular bands of muscle entirely surrounding the urethra—one at the bladder neck called the internal urethra and composed of an increase of the fibers making up the circular layer in the bladder wall, the other between the two layers of the urogenital diaphragm called the external sphincter. This is approximately correct so far as the external sphincter is concerned. It is entirely surrounding the urethra, is composed of striped muscle, is voluntary in action and apparently has no other function than to keep the urethra closed. The internal sphincter, on the other hand, is not in reality circular at all, and is not a part of the circular layer of the bladder wall, but is in large part composed of longitudinal fibers running forward from the deepest part of the base of the bladder to the prostatic capsule anteriorly. This arrangement creates a constriction of the mucosa at a point where the trigone merges into the prostatic urethra. It constricts not so much from side to side, as from top to bottom, or front to back, and depends for its effectiveness largely on the tonicity of the longitudinal fibers just described. These fibers, together with the entire trigone, are supported and held in place by the general pelvic floor—of which the levator ani and transversus perinei muscles constitute an essential part. Weakening of this floor from any cause will allow a sagging of the trigone and a consequent interference with the tonicity of the internal sphincter.

So much for the sphincters, or closing mechanism. There is another important muscle, lying on the inside of the bladder just beneath the trigonal mucosa. which constitutes the opening mechanism. It is known as the trigonal muscle, and is a triangular sheet of muscle, whose fibres arise near each ureteral orifice and converge downward to form a single thick muscular bundle which goes through the loop of internal sphincter and runs down the prostatic urethra a little way, being inserted near the verumontanum. Contraction of this muscle pulls open the internal sphincter and allows the escape of bladder contents into the prostatic urethra. It is innervated by sympathetic branches coming through the hypogastric nerves and is under voluntary control. It develops differently and acts entirely independent of the muscles in the bladder wall.

The manner in which these opposing mechanisms work is very interesting and must be understood in order to work out an intelligent rationale of treatment for cases in which they fail to operate properly. Young and Macht have worked it out as follows: Normally the internal sphincter is in a constant state of tonic contraction opposing the tonus of the muscular

*Read before Surgical Section, Annual Meeting, Oklahoma State Medical Association, May, 1929.

bladder wall, which for convenience they call the detrusor. When the bladder fills, the elastic detrusor tends to force its contents out, but the internal sphincter is so strong that it cannot be overcome by such a force, not even with the help of the abdominal muscles. No amount of straining will ordinarily force this opening apart. It is reinforced by the voluntary fibers of the external sphincter, and in times of great stress is further reinforced by voluntary contraction of the levator ani, as any one can prove for himself by allowing his bladder to become overdistended and then standing near some running water. The only way the sphincter can be opened is for the trigonal muscle to contract and pull open, which is what is done in normal micturition. This has been definitely proved under vision, and I nave verified it. Incidentally at the same time there is a relaxation of the levator ani muscles and a lowering of the bladder floor rendering it easier for the trigonal muscle to pull down the lower segment of the internal sphincter. If these muscles do not relax it is almost impossible for urination to proceed—which again any one may prove for himself.

True incontinence, or inability of the bladder to retain urine, can only occur because of two types of lesions:

1. Lesions which cause a constant contraction of the trigonal muscle.
2. Lesions which cause an inability of the sphincters to remain closed.

The first type virtually may be said not to exist. The nearest approach to it is seen in those cases where there is pathology within the bladder which irritates so greatly that the trigone goes into spasm on the slightest accumulation of urine. Tuberculous ulcers in the region of the trigone, stones accompanied by marked infection of the bladder, chemical irritation of the mucosa about the bladder neck, paradoxical incontinence following marked overdistention, irritation of foreign bodies, clots, etc., are all examples which cause this type of incontinence for a time. In every instance, of course, the muscle is responding merely to a reflex irritant, and when this irritant is removed the spasm will cease. Even in these cases the incontinence is never absolute, because the external sphincter and levator ani muscles are still present and can act voluntarily to control urination to a certain extent.

The second type of incontinence, where the sphincters cannot remain closed is commonly seen due to six principal causes:

1. Nerve lesions causing loss of muscular contractility.
2. Ulceration of bladder neck causing loss of tissue so that the walls cannot come into apposition.
3. Stiffening of bladder neck due to enlarging prostate or inflammatory infiltration.
4. Sagging of bladder floor, causing loss of muscular tone in the sphincters.
5. Trauma, especially postoperative, following prostatectomy.
6. Congenital, as in epispadias.

Nerve lesions causing incontinence are most commonly those due to cord injury or systemic diseases which are amenable to medical rather than surgical treatment. Their discussion is not intended in this paper.

Ulceration with loss of tissue is very uncommon, and is more likely to result from tuberculosis than anything else. It can result from malignancy, chemical sloughing, extravasation, etc.

Stiffening of the bladder neck is very common, and forms a part of virtually every prostatic syndrome. It is this which causes the phenomenon known as dribbling, where the urine leaks out slowly without the patient being aware of it. The internal sphincter is thrown completely out of function, because the prostatic lobes grow up between its fibers and stretch them apart or catch them and hold them so that they cannot act. Meantime, the trigonal muscle, due to its constant attempt to pull open a loop which has lost its elasticity, becomes hypertrophied and stands up as a solid ridge in the floor of the bladder. Inflammatory infiltration will cause a similar stiffening in cases of stricture or extravasation. Sometimes it is seen following overinstrumentation.

Sagging of the bladder floor, causing loss of muscular tone in the sphincters is very common in women following lacerations due to child birth. Even in many cases where there is not an actual cystocele the patient notices that there is slight leakage of urine at times. I have had such cases show up in patients who were kept in bed over long periods of time; and I have no doubt that a careful inquiry would reveal that a large percentage of women past fifty who have borne children would admit that their urinary control was weak. In men also, who have led a sedentary

life or who have had rectal pathology impairing the strength of levator ani muscles I have seen a few cases of this same trouble.

Trauma is a very potent and frequent cause of incontinence. Especially it is seen in cases of instrumentation for stricture. I have seen one case following cautery punch. This is one of the reasons why the perineal method of removing prostates lost its popularity. It was followed by incontinence in a large number of cases, especially in cases operated upon by inexperienced surgeons who completely destroyed the external sphincter and pushed the levator ani muscles aside so that the bladder floor was left without support. The skilled operator avoids these errors, and today leaves his patients with good control in virtually every case.

Congenital incontinence is almost always present in cases of epispadias. These poor children are ostracised from society and for the most part grow up without education or social advantages. In such cases there is a failure of union anteriorly between the two sides of the urethra and supporting structures, leaving a widely dilated bladder neck with only a membranous or fibrous wall in front, and no attachment of the basal sphincteric fibers to the anterior prostatic capsule. In many instances, the pubic symphisis is widely separated and there is no urethra beyond the skin of the abdominal wall.

The treatment of these various types of incontinence resolve itself into a very simple matter when one considers the anatomical principles involved. All of the cases included under type 1 can be cured by relieving the causative lesion as for instance removing a stone or foreign body, curing the ulcer, alleviating the irritation, or draining the overdistended bladder until its normal function is restored. Likewise, the cases 1, 2, and 3 of type 2 must be treated by removing the cause, such as treating the neurological lesion, removing the enlarged prostate, treating the inflamed area by rest and drainage, diverting the urinary stream temporarily and healing the ulcerated area in the bladder neck, etc. Some of these things are easy and some are not. Every case must be handled according to its needs, but in general it may be said that omitting tuberculosis, malignancy, and permanent nerve lesion, they can all be cured. When they are cured and we have healthy tissues to deal with, then we can proceed with reconstructive surgery along the lines outlined in this paper.

The problem in virtually every case will then resolve itself into the same one; viz: to reconstruct a sphincter which will hold the floor of the internal urinary meatus constantly against the roof when the trigone is not contracting. The trigonal muscle is almost always there either in whole or in part. It is wholly there and fully functioning in epispadias. It is seldom or never injured in prostate operations. It is always present in the sagging floor cases and the extravasation and trauma cases. It is practically never wholly destroyed by ulcerations. Even if it is, the detrusor will overcome a weak sphincter. Therefore the opening mechanism is protected by nature and stands ready to help us. All we have to do surgically is to reconstruct a closing mechanism that will half way function and we have accomplished the purpose.

Here again nature has pointed the way. All those operations based upon removing a portion of the roof or anterior wall and thereby tightening the internal meatus are ignoring the vital principle shown in the first part of this paper that the floor is the movable portion of the sphincter. The roof is intended to remain fixed. It is buttressed by heavy fibrous tissue running between it and the symphysis pubis and the anterior abdominal wall layers, and remains fixed. The floor is pushed up against it first by its own longitudinal fibers, and second by the lift of the levator ani muscles. Therefore, when its own sphincteric fibres become insufficient to maintain good closure, the logical thing to do is to strengthen the lift of the pelvic floor through the levators, thereby lifting the lower segment of the internal sphincter against the upper segment and maintaining it there unless pulled downward by contraction of the trigone or forced downward by hydrostatic pressure from contracting detrusor muscle.

Such an operation is simplicity itself, and consists merely of doing a careful perineorraphy, by bringing the levator ani muscles together in the midline, and suturing them together along with any other supporting tissues that may be used. It was first suggested by Keyes of New York, who reported three years ago that he had done this in a man who was incontinent following perineal prostatectomy. Keyes sutured the posterior end of the bulb to the levators, thinking that in this manner he could prevent adhesions between rectum and urethra and allow the external sphincter to function. Apparently he did not consider it applicable to anything ex-

cept incontinence following perineal prostatectomy. It happened that at the time this report came out I was struggling with a similar case. I tried it and it worked beautifully. I also supposed that the result was due to releasing the external sphincter from adhesions, and continued to have this idea until I found that it worked equally well in congenital incontinence. Since there were no adhesions about the urethra in these cases, I had to revise my ideas as to why it helped and began to study the matter out, finally arriving at the explanation which I here present. I have since used this same operation in two other cases, one of epispadias and one of incontinence following prostatectomy, with like favorable results in all. Report of cases is as follows:

CASE REPORTS

Case No. 1—C. L. C., aged 81, admitted to hospital June 17, 1925, suffering from hypertrophied prostate. Owing to his advanced age and feeble condition he was not operated upon suprapubically, but was turned to me for perineal prostatectomy, which I did August 17, 1925. He healed slowly and without mishap, except that he was totally incontinent. He remained in the hospital until March 23, 1926, with improvement in this particular. I had tried massage of the prostatic bed in the hope of softening up scar tissue but could see no difference. On March 23rd, he was operated upon by the Keyes method of bringing the levators together and suturing them to the posterior end of the bulb. This was done under local infiltration. Five days later he noticed that he could hold his urine for two hours without dribbling. Then it would overflow suddenly. I concluded that the sudden spasm was due to bladder irritability, and began stretching up the bladder by injections of sterile water, as at this time it had only 2 1-2 ounces capacity. The length of time between urinations improved daily until when his bladder held the normal amount, he could go all night without trouble and could start, stop, or hold his urine in the daytime as well as anyone.

Case No. 2—H. S., aged 74. Operated upon for hypertrophied prostate by the perineal method April 26 1928. Healed unusually fast and was dismissed May 15th. In excellent condition except for the fact that he would dribble urine when he coughed or sneezed or otherwise strained. He remained at home until October 24, 1928, at which time he returned to the hospital for something to be done about the dribbling. It had improved slightly, but was still troublesome enough that he did not like to attend social events, church, etc. The next day I did the Keyes operation on him under local anesthesia. He healed uneventfully, and was discharged November 4, 1928, entirely continent. I saw him several times afterward, and know that he had no further trouble.

Case No. 3—Leo A., aged 15, a case of complete epispadias, incontinent since birth. Was admitted August 7, 1926, on the service of Dr. C. B. Taylor. On August 25th, a suprapubic drain and plastic operation on the penis was done, with good results, but no change in urinary control. Was readmitted February 22, 1927, and Dr. Taylor did the Keyes operation as already described. Ten days later he was discharged with the following note by the interne: "Stitches removed. Wound practically healed. Patient has very good functional result. Can hold urine both day and night and stop stream in middle of urination.

Case No. 4—Marvin R., aged 9, complete epispadias, incontinent since birth. Admitted June 26, 1928, and operated upon July 9, 1928, at which time a suprapubic drain was placed in and the bladder neck tightened by suturing it in the space of Retzius. Also a plastic operation on the uretha was done by the Young method. This broke down except at the upper end, which held for about a quarter of an inch. Also it was easily demonstrable that the bladder neck remained tight, though the child was not continent at all. Operated upon again August 15, 1928, at which time the Keyes perineorraphy was done, and another plastic attempted on the urethra. The perineal operation healed by first intention and the child became continent, much to his joy. The urethral operation broke down again, but held for about half an inch at the upper end.

Operated upon again August 27, 1928, at which time merely a plastic operation on the urethra was done by turning down a flap from the abdominal wall and suturing it in place on top of the epispadias. This was then covered by foreskin which was turned up from below the glands. A catheter was left in the urethra for about one week and then removed. This time it held, and now he has a penis, not very shapely, but still a tube to carry off his water. He is also continent, though his bladder capacity is very small.

SUMMARY

1. The sphincters of the bladder consist of two muscles, one a weak voluntary circular one and the other involuntary longitudinal fibers which pull the anterior end of the trigone up against the anterior portion of the bladder neck. They are assisted by the levator ani muscles which lift up the entire bladder floor.

2. The expulsive forces of the bladder is not sufficient under ordinary circumstances to force open these sphincters. There is provided also an opening muscle which lies on the trigone and runs through the orifice of the bladder neck. Voluntary contraction of this muscle pulls open the closed sphincter.

3. True incontinence can only occur if this muscle remains in a constant spasm or if the sphincter loses its tone and remains open. Even if the first of these occurs, the external sphincter will hold the stream.

4. Ulceration, tumors, nerve lesions, sagging of bladder floor, trauma, and congenital defects are all causes which operate to cause the internal ring to stand open.

5. The treatment consists in lifting the bladder floor and providing a tonic muscular sling to hold it up. This can be done very simply and easily by doing a perineorraphy in the male or female. Four illustrative cases are reported.

INTERESTING KIDNEY CASES—LANTERN SLIDE DEMONSTRATIONS*

S. D. NEELY, B.S., M.D.
MUSKOGEE

In this article I will attempt only to deal with the end results of urinary retention and anomalies of the urinary tract, illustrated by a few slides. Retention of urine may occur anywhere within the urinary tract and may be caused by many factors. For convenience sake it will be divided into urethral, ureteral and renal.

Urethral retention is most commonly caused by prostatic pathlogy or stricture of the urethra. This is so evident in the history and examination that anyone careful in these two studies can, in most instances, determine this factor.

Ureteral and renal retention is much more subtle and harder to definitely prove. Many factors enter here such as, stricture or narrowed caliber of the ureter, renal ptosis and external causes, tumors (pregnancy, fibroid) or anomalous placements of pelvic and renal blood supply. Renal retention is, in most cases, within the pelvis and is primarily ureteral. It must be remembered that an extremely narrowed major calyx may cause retention or we may have retention within the kidney tubules—this I believe to be the determining factor in parenchymal renal stone.

Granting we have a patient with urinary retention, we know that if any part of the urinary tract is subjected to this insult, urinary decomposition sets in, alkalinity results from decomposition and this favors infection. The pyuria in turn forms a nucleus for stone. Retention, I believe, is the chief factor in all stone formation. The patient may respond with any type of reaction to this, varying from a typical renal colic to a vague, heavy sensation with slight pain. Ordinarily the higher the retention, the more difficult it is to diagnosticate. It may readily simulate appendicitis, gall tract disease, gastro-intestinal disturbances or abdominal angina. It is most important for success with the patient to recognize this condition and it is surprising the number of patients seen with end results of right renal retention, who have had an appendectomy done in the past by men capable of dealing with the true pathology, had it been recognized. The patient and physician are too prone to believe any right lower abdominal pain to be due to appendicitis. Many times I have been approached by laymen saying: "I have a pain here, (pointing to McBurney's point) have I appendicitis?" Suffice it to say that no patient should be subjected to an appendectomy unless disease of the urinary tract has been ruled out, provided he does not present an acute abdomen.

One of the most difficult type of cases with which urologists have to deal and one of the most difficult to treat is a symptomatic anomalous kidney. Often an anomaly of the urinary tract may not be recognized during life. Some are detected by urologists in routine examinations but many are not symptomatic. When symptoms are present, the condition calls for the utmost care and caution in outlining treatment. I have personally seen within the past two years two different cases of renal pain with pus cells and albumin in the urine, each one of which, I firmly believe, have a single kidney. No opposite

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urteral orifice could be demonstrated by cystoscopy with the aid of indigo-carmine, no renal shadow could be demonstrated on an X-ray film. Pyelogram in one case showed a normal pelvis with a tortuous, irregular ureter. Operative work was conta-indicated.

Recently operation was done at this hospital upon an anomalous kidney. This patient, in the history, told of an injury to the left side eight months previous, followed by severe renal pain which forced him to bed for forty-eight hours. No hematuria was noted. Since this time he has had attacks of renal pain intermittently and had been told that he probably had a stone. Urological findings showed pus cells in specimen from left kidney, function five minutes; right kidney negative, function four minutes. Pyelogram right was normal. Pyelogram left showed a definite elongation of the pelvis with calices pointing mesially and anterio-posteriorly. Operation proved a rotated kidney and elongated pelvis—some six inches,—which admitted only the little finger. The kidney was otherwise normal. If the condition had been recognized, operation would not have been recommended.

RENAL COLIC

O. R. GREGG, M.D.
ENID

Renal colic is a term loosely applied to pain in the lumbar region other than lumbago. While only a symptom, it is the direct cause of the patient calling you. Little thought has been given to etiology or diagnosis. Scott, in his new dictionary, states that renal colic is that pain caused by the obstruction of a ureter due to calculus. Mr. Scott is partially correct, but I defy him to differentiate the pain caused by a stone, from that caused by a blood clot, chunk of pus, or an angulated ureter. I have never been able to differentiate the sharp pain of renal colic from the slow, dull pain of nephralgia. It has been my experience that the sharp, colicy pain is preceded by the slow, dull ache and it all amounts to a matter of intensity.

Differential diagnosis must be made from appendicitis, salpingitis, ovaralgia, colitis, cholecystitis, cholelithiasis and duodenal ulcer. Errors of diagnosis are legion. All of us have mental pictures of battle scared abdomens that have had first the appendix removed, then tubes and ovary, and lastly the gall bladder has been sacrificed, while the pain still remains. Braasch states that at their clinic fully one-third of the patients with stones in the right kidney have had the gall bladder or appendix, or both removed without relief. Diagnosis can only be made by a thorough complete urological examination, and with modern technic there should be no prejudice against such an examination.

If urinary diseases would follow the description of our text books, the diagnosis would not be difficult, but unfortunately there are few rules of precedence in urology. Each case is a picture unto itself. Many renal pains are referred to other parts of the urinary tract, as I wish to show you in the half dozen cases that I shall present. Many times an afflicted right kidney causes the pain to be in the left. Distention of a kidney will simulate uterine colic and in one of the cases that I shall show, you will note the kidney pain simulates a prostatic condition.

With all these difficulties isn't it strange that so few urological examinations are made. It is only by careful cystoscopy, pyelography, function tests and urine analyses, that we are able to avoid these errors, and do justice to our patients, and live up to the high standard of our profession.

CASE REPORTS

Case No. 1—Salvation Army worker, age 46, female, married, one child, usual diseases of childhood without any apparent results. Passed climacteric four years ago.

Patient had had backache more or less continuously for the past nine or ten years, pain low down in back very suggestive of ureterine pain and of a cramping, colicy nature. Three times in five years had had cystitis at which time it was necessary to pass urine every hour day and night. 10-17-28, patient came for examination. Extreme pain low down in back, passes urine every hour during daytime but not so frequently at night. Uterus normal in size and frequently movable. Urine: albumen one plus, acid four flus, pus two plus. 10-23-28, passed 24 F cystoscope with a little difficulty because of tight external orifice containing small caruncle. Bladder very red and edematous, passed No. 5 catheter up right side but on left I got a fine filaform through with difficulty. I have gradually dilated this patient until she now takes a No. 14 F. on either side. She has absolutely no pain in the back whatever,

and has not had since the first of the year when dilation on the left side immediately relieved her.

I want to call your attention particularly to the pain low down in the sacral region that simulates a ureterine colic.

Case No. 2—Merchant, age 34, male, single. Never had any serious sickness until five years ago at which time he passed albumin in his urine and was cystoscoped. Pus in urine most of the time since. Denies all venereal diseases, Wassermann negative; complains of being tired, nervous, loss of weight and "no pep", complains of attacks of pain in the region of the prostate. Both rectal and urethra scopic examinations of this organ show normal in size, no nodules, good consistency, membrane apparently healthy, no growths, normal discharge on massage, no pus. Cystoscope examination of the bladder shows normal condition except flakes of pus floating in urine. Both ureteral orifices somewhat inflamed. The attacks of pain strike him suddenly as if he was attempting to pass a stone and would last all the way from thirty minutes to several hours. At no time were we able to find blood cells in the urine. He complained of backache but in desperation I catheterized the ureters and brought on the characteristic, colicy pain in the region of the prostate. The urine from both ureters shows abundant pus cells. It was with difficulty that I was able to pass a No. 3 F. catheter. Each catheterization would bring on the characteristic pain in the region of the prostate. I have dilated this patient to No. 11F. His attacks are entirely gone, he has gained 15 pounds in weight and feels like his former self and tells me he is soon to be married.

Case No. 3—Age 33, two children, was healthy in childhood, had a mild attack of typhoid fever and mild attack of flu. The patient passed several renal calculae, eleven years previously over a period of about three months. Urinalysis has been made from time to time during the past 10 years, all of which have been negative. Four years ago. patient had an occasional dull pain over McBurney's point. These attacks were accompanied with nausea, vomiting, severe sick headaches. 1926, the W. B.C. arose to 16,000 and an appendectomy was performed. The appendix looked very normal and apparently had no adhesions. In two months, the patient again had mild attacks of pain, combined with the nausea, vomiting and intense headaches. At this time it was thought probable that an ovarian trouble was the cause and various extracts given with a minimum of results. 1927-28, the pains continued from time to time but seemingly became localized in the region of the liver, and gall bladder was thought of. The patient was cystoscoped without difficulty and a No. 5 catheter passed. Since that time she has been practically free from her pain, nausea, and headaches.

Case No. 4—Male, married, usual childhood diseases, an employee of a refinery.

Attack of diphtheria which was supposed to have left his heart with a lesion I was unable to find, nor could the internist to whom I referred this patient. G. C. infection 12 years ago treated with the silver preparation and probably cured. For the past three years this man has had a pain on the right side over McBurney's point radiating upward and towards the median line taking the direction of the colon. This was present most of the time but had exacerbations in which the patient would double up and be confined to his bed 24 hours.

The urine examinations were always negative. Diagnosis of chronic and acute appendicitis, and of cholecystitis was made from time to time. I felt sure that this was an appendiceal colic as did the surgical consultants to whom I sent this man. The R. B. C. was 4,000,000 but repeated W. B. C. at no time higher than 7,500. This patient had been cystoscoped in Colorado and ureters catheterized and he thought he had obtained some relief. To please the patient, I catheterized the ureters taking the pyelogram. As soon as the catheter was a third of the way up the urethra on the right side, the patient informed me that I had brought back his appendicitis. This patient has been dilated quite easily to a No. 12 F, his attacks and soreness seem to have disappeared. He has worked the past three months.

Case No. 5—12-11-28. Age 23, married, housewife, usual diseases of childhood. History of passing renal calculus seven weeks previously. Attack three days standing with gradual backache and pain worse on right side, becoming very acute at times, worse at night. Urine shows few pus and many blood cells. A No. 5 catheter passed to pelvis and olive oil injected above calculus. The calculus on the left side was watched carefully with the X-ray as it passed down the ureter, the pain remained the entire time over the region of

the right kidney. As soon as the softened calculus passed into bladder at the end of forty-eight hours the pain ceased instantly.

Note the stones on the left side while the pain was over the right kidney.

Case No. 6—Is a case of silent stones that I know very little of the history. The patient came into the hospital under the surgical services for a smashed foot. He was a man about 65 years of age, and stated that he had never had a sick day in his life, and this was the first time he had visited a physician. The X-ray technician thought she had fogged some films and placed this man on the table for a test exposure. Later on this man was struck with an automobile and killed, an autopsy confirmed the stones. The urine on the patient entering the hospital showed few pus cells only. No history of pain or hematuria could be ascertained.

Case No. 7—Housewife, age 45, married, two children, oil field worker's wife. Patient recently been confined to an Oklahoma Hospital for treatment of cystitis, pain continuous in bladder; must urinate very frequently. Patient referred to me 2-6-28, for pyelitis; complains of pain over region of kidneys particularly the right. Specimens from either kidney and from bladder fails to reveal pus cells. X-ray and pyelograms negative. At this time the patient became somewhat better of a urinary trouble and I returned her to the family doctor with a negative urinary diagnosis. Ten days later he again returned the patient to me with a diagnosis of pyelitis. Search for blood and pus cells again was negative. An internist made an examination trying to locate possible focal infection but failed to give any information.

At the second cystoscopy I noticed a fine eruption radiating from the orifices of the ureters; other than this the examination was negative. The pain over the kidney still persisted running down each ureter, particularly the right. Urination frequent, every half hour with much tenesmus.

Although two or three negative Wassermanns had been obtained, I gave her an injection of neo-salvarsan, more because I knew of nothing else to do, than for scientific reasons. The results were simply magical. After the second injection, the Wassermann was four plus. Her frequent urination along with the pains in the region of the kidneys and ureters had all disappeared. Ten injections of neo-salvarsan and thirty of mercury and bismuth were given this patient in 1928. She is again taking mercury injections and has no urinary symptoms.

HEMATURIA

J. W. ROGERS, M.D.
TULSA

Many things may cause hematuria and many times it is of very little importance. The importance of blood in the urine is due to the fact that it may be caused by malignancy, tuberculosis, stone or prostatism. The blood may be either macroscopical or microscopical and in either case we have no right to dismiss a patient with blood in the urine until we are reasonably sure none of the fore-going conditions exist. It is true that in some cases we find large quantities of blood in the urine and being unable to find any cause, call it essential hematuria, but in such instances the patient should be warned to have periodic examinations, since an early case of tuberculosis or a small papilloma might be overlooked. Don't treat hematuria expectantly or as a disease entity, keep in mind that it, like fever is only a symptom and such an important symptom as to demand the most pains taking examination to find the cause.

Some idea of the source of the blood may be gained by the three glass test. If the bleeding is from anterior urethra, the urethra will be seen to bleed, the first glass wil contain blood and the remaining glasses will be comparatively clear. If in the posterior urethra, and in considerable quantity, there will likely be blood in all three glasses but most in the first glass. In cases of inflammation of the posterior urethra and prostate we have terminal hematuria with the third glass containing a few drops of freshly passed blood and usually considerable pain at the termination of the urinary act.

Blood coming from above the vesical sphincter is usually thoroughly mixed with urine and may come from the bladder, ureter or kidney. Urine passed may show worm-like ureteral casts of blood clots which means that the blood comes from above the bladder or there may be blood casts which mean bleeding from the parenchyma of the kidney.

Given a case of hematuria, it is then first necessary that we determine the

source and second, the cause. If a patient has an acute gonorrhea and a terminal hematuria we assume that it is due to the infection or improper treatment and treat expectantly. If a person is suffering from an acute infection and has blood casts as well as free blood, we are justified in the belief that he has a hemorrhagic nephritis and treat it accordingly. I can think of no other type of hematuria that should not be more thoroughly investigated at once. If the urine contains blood but no pus or bacteria, we are likely dealing with a neoplasm, stone or acute nephritis. If we have blood, pus and no bacteria or only tubercle B., we are dealing with tuberculosis. If we have blood, pus and bacteria we may have any of the above secondarily infected or simply a cystitis.

If the bleeding is from the urethra, an endoscopic examination will reveal the nature of the trouble. If from above, a cystoscopic examination will tell us if it is from the bladder or ureter. If the blood is coming from the ureter, then it is necessary to make pyelogams and ureterograms; when there is bleeding from the kidney, a pyelogram may be confusing, as a blood clot in the pelvis may lead one to think he is dealing with a hypernephroma when in reality it may be some less serious disease. Such pyelograms should be rechecked and, if possible, when there is no bleeding present.

In many cases of microscopic hematuria, repeated pyelograms are necessary to demonstrate the presence of a growing tumor, I know of nothing that could be of more importance for it is only in the early diagnosed cases that the patient has a chance for his life. I was called to see a man that had been bleeding profusely for three or four months; cystoscopy showed blood from the right ureter or kidney. A pyelogram revealed a growth in the kidney. The kidney was removed but the patient died from general carcinomatosis some three or four months later. A very unpleasant sight I assure you.

I recently saw a woman that had been bleeding for four months. She had been X-rayed, given hemostatics and bladder washes and had nearly bled to death. A large papilloma was found near the left ureteral orifice. Two fulgurations stopped the bleeding and with four such treatments the tumor was entirely destroyed. Another case of a woman who had been bleeding off and on for six years had a carcinoma involving the ureteral meatus that could not be cured by radium.

A man, age 42, came into my office carrying a renal stone as big as a bird's egg; he passed it the day before and had had some bleeding following. He had been having such attacks since childhood, had been in hospitals, had been treated for tuberculosis but had never had so much as an X-ray examination made. A stag horn calcus, involving the whole kidney pelvis, was found; by good fortune the opposite kidney was normal. Many of our cases of tuberculosis are investigated after the whole urological and genital tract is invaded, when we can only give palliative treatment.

Blood in the urine is always of importance, simply because blood ceases to be passed does not mean that the pathological process has disappeared, nearly all will stop bleeding for a time and in the meantime the patient will lose his chance for health or life.

CONCLUSION

The presence of blood in the urine is of the utmost importance. It may be and frequently is a symptom of such serious diseases as cancer of the bladder, ureter and kidney, prostatism, calculus and tuberculosis of the kidney and bladder.

Until one is reasonably certain that none of these exist, the patient should be under observation and be given the benefit of the most pains taking urological examinations.

PULMONARY TUBERCULOSIS*

FRED HERBERT CLARK, M.D.
WASHINGTON, D. C.

In the face of the volumes that have been written on the above subject and the splendid serial publications that are coming from the press monthly, it is perhaps somewhat presumptious to even attempt the presentation of a paper upon the above subject, but, believing in the old saying, "The constant dripping wears away the stone," the writer makes bold to ask your consideration of this oft repeated subject.

It will not be the purpose of this paper to even attempt a strictly scientific discussion, for, while it might be of very great interest to some to discuss the minute formation of the tubercle, as to its beginning, its growth by layers, its origin,

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whether a dead or a live bacillus, etc., from a scientific standpoint, we might refresh our minds and brighten them up somewhat, but would we have accomplished what, from a practical standpoint we most desire, that, when tomorrow we again take our place in the front line of battle, will we be the better able to wage war against this arch enemy, than we were before. If we are not, then this effort shall have been in vain; if we are, be it ever so little, then the time we have spent in this consideration may be considered as a gain and placed on the profit side of our *information account.*

In the wide realm of preventive and curative medicine, there has, perhaps, never been put forth as great and wide spread effort to combat any disease as there has been in the great fight against tuberculosis, and may I say, "We fight not as those without hope." Only a little more than a quarter of a century ago, we were practically struggling in the dark. We were speaking of the disease as "the great white plague" and dreading contact with it nearly equal to that formerly felt for yellow fever and the so-called "black plague." But today, we do not face this condition with the same hopeless feeling that was formerly felt; a new era began when the specific organism causing this disease was isolated and we knew what kind of an enemy we were fighting, and it is to the manner of carrying on this fight that the writer desires to call your attention, with the hope that some word may be dropped which may be of some service to those who must bear the brunt of this battle, and who are the *family physicians* to whom I am speaking.

I know how we dislike at present to consider anything of a military nature, but may I not ask your indulgence as I try to show every family physician present the strategic position he occupies by likening him to a member of the advance or the outpost of an army moving forward into battle; no sleep and little rest for those brave men as they kept every faculty strained to prevent a surprise by the enemy. Is that not just the position the family physician holds today, every professional faculty strained, sometimes almost to the breaking point, that this deadly enemy may not break through lines of defense. While prior to the days of the World War, we were busily engaged in fighting tuberculosis, it took this great upheavel to thoroughly awaken us to our full responsibility in this great struggle. To some of us in these years since the war, pictures have been printed on our memories of the havoc that tuberculosis has wrought, that can never be effaced. Do not misunderstand me and think I am saying the war was the cause of all the tuberculosis that has followed in its train, for I do not believe that, but what has happened is that, because of the war, it has been brought to our attention and the means of relief that have been provided by our government, running up into millions annually, serve as an illustration of the extent of the ravages of this dread disease, which has been going on for years and years, but which has been so definitely brought to our attention, that I feel both professional and laymen are alive to the importance of this subject as never before.

May I present to you to day, as a key thought for the basis of this short consideration, a statement used by Dr. Wilbur, Secretary of the Interior, recently, in an address before one of the Tuberculosis Associations in Washington, D. C. While I had heard it in effect time after time, yet the trite manner in which he presented it, struck me with great force; he said: "Early discovery presents our greatest hope for early recovery." May I ask that, if you forget every other word I say to you, that you will remember that statement, for in and on it hangs all our hopes for future success.

As many of you know, for the past seven years the greater share of my time has been spent in the tuberculosis hospitals provided by the Veteran's Bureau for the care of ex-service men and nurses suffering with tuberculosis, so that the message I bring you is in no sense a merely theoretical one, but one burned into my mind so deeply it will never be erased.

Will you pardon me if I bring you just one picture that I trust may illustrate what I am trying to bring out by the statement I gave you for my key thought. A man thirty years of age came on my ward and under my immediate care. As I was roentgenologist, as well as serving as ward surgeon, I, as a routine matter, came in contact with the X-ray films made the day following his admission to the hospital. These showed his was a far advanced case of pulmonary tuberculosis, both lungs being involved, with a large cavity in one upper lobe. He was married, with a splendid wife and two beautiful little girls—everything a man could wish for, so far as his home was concerned. This is the history he gave me. He was a white man and a carpenter and builder. When the war

came, he dropped his carpenter tools, put on his uniform and picked up his rifle. After an honorable service across the sea, he returned home and again began work at his trade. In 1921, his family physician, after examining his chest, told him he felt he had tuberculosis in one lung, but that there was but a small involvement and he felt sure, if he would stop work and rest, or as we say in hospital parlance—"chase the cure"—for a year, he would be well. But he thought he was strong and robust and laughed at the doctor for even thinking he had tuberculosis, he went on with his work—the next year the doctor died. Whether the man really felt he had tuberculosis or not, he never admitted it, but he worked on until 1926, or for more than four years, when he broke down, and a few weeks later entered the hospital, where I saw him and where, after about three months, he passed away, a victim of his own mistake, for had he listened to the advice of his family physician, I can see no good reason why his case like hundreds and thousands of others of a like character might not have by careful treatment been brought to a condition of arrest.

Now will you indulge me while I briefly portray another case, who also was under my professional care and observation for a little more than a year. In the spring of 1924, while holding a responsible position as a clerk in a large steel manufacturing concern, he began to be troubled with a rather severe cough; he found that he seemed to tire more easily than formerly and was losing weight. He did not do as so many do, take some patent cough mixture and a ready made tonic, but, selecting a physician whom he considered well qualified, submitted himself for an examination, and to his surprise as well as dismay, found he had a far advanced case of tuberculosis involving one lung throughout all lobes and the upper lobe of the other, the physical findings of the examiner being well supported by the X-ray findings.

There was no delay on the part of the latter young man, but, selecting the institution he felt promised him the best opportunity for a cure, he entered it as a patient, and in the common language of hospital patients, began "chasing the cure." It was not an easy task, for he was slow to show any improvement and a little later hemorrhage followed hemorrhage, but still he fought on. Having the old idea that a change of climate might be beneficial, he went far west, but his progress was no faster there, apparently, than it was in the East, and so selecting a tuberculosis hospital within a hundred miles of his home where the members of his family and his friends might come and see him occasionally, he entered this hospital, determined to win in the fight to regain his health, and it was one of the rewards that brighten the way of the physician caring for patients of this character that had apparently reached the turning point, for he slowly but steadily began to show improvement, until a few months ago, after being under my observation for a little more than a year, he had regained nearly all his lost weight, and was apparently well on his way to the stage of arrest.

I have dwelt at length on the comparison simply to try to add with all the emphasis I can to the statement quoted early in this paper—"Early discovery is our surest hope for early recovery." In fact, as the problem appears to me, early discovery is the only means promising any sort of recovery, coupled, of course, with the full cooperation of the patient in the carrying out of prescribed treatment.

There are many problems that must be met by one who undertakes the work of a specialist in diseases of the chest, which it is impossible to more than merely mention here. It seems to me that the first great requisite for success in this field of medicine is *patience*. There are many reasons for this, not the least of which is the confidince it inspires in the patient. How many times has the physician listened to the statement of the patient, that, when Dr. Jones examined him, it did not take him ten minutes to make the complete examination. While it is true that years of continued practice at any given method of procedure enables one to carry out such a procedure more quickly than the novice, yet in the examination of the chest there are so many different points to be considered, which are different in practically every case, and that require careful consideration in summing up the case, that one needs plenty of time and the grace of patience to reach the goal of success.

The last few years have impressed upon me, more than all my former years of practice, the great value of a very carefully taken history. While the family history is of importance, the personal history is of greater importance and should set forth in detail, whether or not the patient had the usual childhood diseases, and if so, whether they were severe or mild, and whether or not they were followed by any complications. Ascertain if the patient is subject

to frequent colds and their character, as to whether they are confined to the head or to the chest or both; their frequency and duration, and whether or not they are accompanied by sore throat, and if so, whether it is in the form of a tonsillitis or a general pharyngitis. I am speaking of all these common things, because in these later years in many instances improper diagnoses of pulmonary tuberculosis have been made, when, in fact, the whole trouble lay in a pair of old chronically inflamed tonsils, which were causing a cough and an evening temperature, two of the most commonly accepted symptoms of pulmonary tuberculosis.

Is the writer making this statement purely on theory, or is it substantiated by fact? By fact, found repeatedly long after patients had been told they were suffering from pulmonary tuberculosis, and when upon examination, no evidence of such a condition was found, but where a pair of old infected tonsils were found, and after their removal the evening temperature and cough ceased altogether.

Am I speaking altogether too elementary? If so, I beg the pardon of my listeners, but I am trying simply to conduct a *review*, and am starting at the very beginning so we may advance, if there is time to do so, feeling we have thoroughly prepared the way for the later advance.

The history taken, naturally the next step is the examination. To each of us there has been given, if we are normal physical individuals, five special senses—three of which are called into use in an examination of the chest, and each has its own relative importance. These three special senses are seeing, feeling and hearing. First of all, let me say, whether a doctor can afford to have a comfortable desk at which he may work, he cannot afford to get along without a pair of physician's scales with the measuring rod for ascertaining the height. Scarcely ever a patient comes for examination who can give the physician their proper weight. Every old line insurance company has a carefully prepared table of proportionate weights and heights upon which to base the relation the weight shown on their examination blank has to the normal weight, and this matter without question has not been given the attention it deserves.

The weight and height taken, our next step is with the trunk bared to the waist, we observe the development of the chest, the stage of nourishment, the color of the skin, always observing closely for scars or other signs of a former operation, the movement of the chest, comparing one side with the other, the character of the breathing, and when we have finished this, we have a good ground-work upon which to base the opinion we shall render, when we have finished our examination.

Now we come to the second special sense or feeling—trained finger tips, and fingers may secure for us much more infomation than we at first might think, if we are willing to be patient in our training of them. Two things only will be mentioned—first, the quality of the muscular tension of the muscles of the chest wall and the absence or presence of fremitus, and its apparent increase or decrease with that found in the normal chest.

Now we are ready to bring the third special sense into use; namely, our hearing, or using the common term—auscultation. This is not only the most important if comparison of the various steps in the examination may be made, but is by far the most exacting of all the methods used in an examination of the chest. No one can simply take a textbook and after reading over a description of what he may expect to hear in an abnormal chest, hope to apply his stethoscope to the chest and immediately find what has been so beautifully described in the textbook. In a general way, it may be said that only after long and patient listening to the various breath sounds in the normal chest, is one able to detect the abnormal. And in the personal opinion of the writer this is true, if he be permitted to base such an opinion upon his own experience. The question is frequently asked as to whether certain men are not better adapted to the examination of the chest than others, and whether one with some knowledge of music might not have some advantage over one devoid of any musical talent? This question is undoubtedly based on the fact that pitch, rhythm and intensity have their places in the proper classification of the sounds heard in the chest, but the writer has been unable to see that a knowledge of music was of any great aid, so far as his personal observation goes. Long continued practice in short periods will, without doubt, bring the best results. It is too apparent perhaps, to even be mentioned that one must have the opportunity to examine abnormal chests repeatedly, in order that he may get all the peculiar abnormal sounds firmly impressed on his mind. In explanation of what the writer has said about short periods, prolonged listening with the

pieces of the stethoscope pressing tightly in the ear after a short period of time causes a sort of blurring or running together of the various sounds, and the examiner finds himself confused as to what he is really hearing. When this occurs, simply remove the stethoscope, rest for fifteen or twenty minutes, and then it will be found that the sense of blurring together clears up. My attention was called to this some time since by a splendid chest examiner of Cincinnati, who was speaking to a small group of physicians and brought this point out very forcibly. In fact, he went so far as to say that he could make but six chest examinations a day; three during the forenoon and the same number in the afternoon, and that to attempt to do more than that, the sounds became as I have just described them, and he felt that an examination made under such circumstances would not be a reliable one. I have, while serving as ward surgeon on a tuberculosis ward, been able personally to prove the correctness of Dr. Irwin's statement. To describe the various sounds heard as the examiner listens, would prolong this paper to an unpardonable length, and it was not the purpose of the writer, as stated at the beginning of the paper, to attempt to present a scientific paper, but, on the contrary, to make a brief review of pulmonary tuberculosis as a whole.

As is known to the most of you, the writer has spent the greatest part of the last seven years in the X-ray laboratory giving nearly his entire time to diseases of the chest, and when the invitation to present a paper at this meeting was accepted, it was his purpose to present a paper on this phase of tubercular work, illustrating the same with films taken in the routine of his work. A transfer from that work to other duties away from the hospital made this impractical, so the title of the paper was changed.

If we should omit considering the X-ray as one of the methods of chest examination, we should omit a very important part of the examination, and one which no one can afford to do without. Let me set myself right in this matter. While as a roentgenologist I put the greatest amount of faith in and dependence upon the findings brought out by a well taken X-ray film, as interpreted by the trained specialist in roentgenology, but only as a support to a well made physical examination and never in lieu thereof. Under no consideration do I feel that a diagnosis may be made on the X-ray alone. I cannot help feeling that many mistakes have been made because of this. Not so very long ago, there was a tendency to urge physicians to invest in a small X-ray apparatus, the salesman holding out to the physician what a distinct advantage it would be to him to be able to do his own X-ray work. No fallacy that I can recall was ever presented to the doctor with so little merit as this. He was told that the apparatus had now been so perfected that it was simple, in fact fool proof, and that he might just as well be making all these *extra shekels, which were really easy money*, as to be sending them to the X-ray specialist. The mere mention of the X-ray makes the writer wish for the moment that he had persevered in the former plan and that together by means of the shadow box and sufficient films we might have considered what the X-ray really shows, when carefully considered.

The examination ended, *what next*, assuming, of course, there is pulmonary tuberculosis definitely or even suspected to be present. So much has been written in both professional and lay press, and spoken from the public platfom, that there is really nothing new to be said; but there is often great good gained from repetition, even though it be frequent, so though it be old, let us consider some of the more salient facts entering into the care of the tuberculous patient.

The first and I believe the greatest element that will contribute to a successful end result is the establishment of complete and supreme confidence in the physician by the patient; this can only be brought about by the physician showing a personal interest in the patient, not that stereotyped professional interest so often spoken of, but that interest which at once becomes apparent when the physician in imagination tries to place himself in the place of his patient, and tries to think how he would feel if he really were in the place of his patient, what he would like to have done for him and said to him, in fact consider everything the patient must pass through every twenty-four hours. An easy task? Not by any means, but one that calls for all that professional skill and psychology, which a heart-felt interest can devise. And let me say, that the physician who is willing to do this will be rewarded by the implicit confidence of his patient, which I believe is the greatest single element contributing to a successful end result of the case. The physician may ask what he will that is reasonable of such a patient, and he will meet with a cheerful compliance. Am I talking about theory and in riddles?

No, if perchance I may be speaking to those who have been placed where they had the care of any considerable number of tuberculous patients.

After much study and observation, I have come to believe that it is a serious mistake to attempt to care for tuberculous patients in large groups. Please do not misunderstand me, and above all please do not quote me as not in favor of large tuberculosis institutions, for I am a firm believer in the necessity for and results obtained by them. But I am also a believer in dividing patients up into much smaller groups than is done in nearly all institutions. If I could have what is my ideal, I would have not more than six ambulent cases in a group with their own cottage built with its sun porch, its kitchen and dinette, and common living room; all on one floor, the building built in bungalow style.

There are so many reasons for this, that it would prolong this paper far beyond the time allotted to it, were I to even attempt a very brief discussion of the advantages, as I see them, so I shall mention only one or two that to me are of the greatest importance:

First— A more *homelike* condition, which will create in the mind of a patient more of the feeling that he is at home and not that he is an infinitesimal part of a huge mass, whose identity is lost. He will feel that he is receiving more nearly *personal care* than where he is one of from thirty to fifty patients in a large group.

Secondly—The question of feeding the patient is the most trying question that arises in the care of the tuberculous patient. No matter how well the large kitchens are kept, and I want to say that, so far as I have observed them, for cleanliness they are not only the equal, but, as a rule, surpass the small kitchen, yet there is the taint of food prepared in mass, which sooner or later becomes objectionable even to a well person; how much more so then to a sick person, who has a hard time to find anything that will tempt his appetite. Then the service of the food in the large mess or dining hall cannot be as satisfactorily accomplished as where a small number sit down around a table, where everything comes directly from the small kitchen, steaming hot and in small quantities.

I am perfectly aware of the apparent objections with which this plan will be met, of which the first will be its impracticability and its apparent increased cost, as well as the apparent inability to secure the additional help required. These are all obstacles, I grant, but I do not believe that they cannot be overcome. When the Wright Brothers were experimenting with their first airplane, wiseacres said very forcibly that they had obstacles ahead of them that could not be overcome and that man had better stay on the ground where he belonged. But now a trip from America to Europe in one of the air palaces excites but little interest and certainly the obstacles that confronted them at first have been met and ovecome. Why, then, may we not apply the same reasoning to the question at hand.

Numerous other reasons for the dividing of large numbers of tuberculous patients into small groups could be given, but time will not permit, and the two mentioned are deemed among the most important.

This paper has already been unduly extended, but lest the writer might be accused of only seeing the pessimistic side of this question, let us turn for the few remaining minutes to a more hopeful and pleasing picture.

The writer, wishing to give a few actual statistics—by actual I mean those made by computations from official reports and not estimated—requested from the Statistical Division of the United States Public Health Service, their official report. Before giving these figures, let me say that the figures presented do not represent all the territory of the United States, but what was represented by the original registration states. These figures are for the period covered by the years 1900 to 1923, which period, of course, includes the World War period, as well as the period following the influenza period of 1918 and 1919, and its immediate effect. The figures given are the total number of deaths from tuberculosis for each 100,000 of population. If the total population of a state or area is known, the total number of deaths from tuberculosis may easily be computed.

The following table gives the year and number of deaths from tuberculosis per each 100,000 of population:

1900—195	1912—145
1901—190	1913—144.5
1902—175	1914—144
1903—178	1915—143
1904—184	1916—141.5
1905—180	1917—143
1906—178	1918—146

1907—177	1919—123
1908—170	1920—117
1909—162	1921— 88
1910—163	1922— 87
1911—159.5	1923— 86

These figures, which are the latest complete computations published by the U. S. Public Health Service, and which show in 23 years a reduction from 195 deaths per one hundred thousand to 86 deaths per one hundred thousand of population, or a reduction of 41.7 percent, certainly disclose a result that is sufficient to make every one feel encouraged, and that after all conditions *might be worse*. A single computation will perhaps serve to give us a little better idea of the real meaning of these figures, for tables of figures are odious at the best.

If the population of the State of Oklahoma in 1900 was 2,000,000, using 195 as the average number deaths per 100,000, then there must have been 3,900 deaths from all forms of tuberculosis in Oklahoma during the year 1900. Assuming that from the year 1900 to 1923, the population has increased to 2,500,000, and the death rate remained the same, there would have been 4,875 deaths from tuberculosis in the state during the year 1923. But the actual number of deaths computed on the average was 2,150, or a saving of 2,725 human lives, and I ask you *was this not worth while?*

This paper has already been prolonged beyond the time it was intended to consume, but it would not be fair to those who have been the means of causing this great saving of human life to pass the subject by without at least paying some mark of tribute. And, though I am a physician, I am going to give the lion's share of the credit to the loyal men in the field of medicine who have labored so faithfully to bring about this result, and I hope the figures presented in this paper may be a means of encouraging them to a continuance of their earnest and untiring efforts to completely annihilate this monster disease.

How may we do it? I know of no better way than that mentioned at the beginning of the paper. EARLY DISCOVERY GIVES HOPE FOR EARLY RECOVERY. How may we accomplish early discovery? ETERNAL VIGILANCE evidenced by frequent chest examinations by the chest specialist, occasional stereoscopic X-ray examinations interpreted by the roentgenologist with special training in chest radiography, daily morning and evening temperatures, and weekly weighing with carefully kept records of the same. All these and many more may be of great assistance in early discovery.

AMERICAN PHARMACEUTICAL MANUFACTURER'S ASSOCIATION

"Keep well—Consult your Family Physician" is the slogan proposed as a part of the advertising campaign to be fostered by the American Pharmaceutical Manufacturers' Association in the coming year. Definite action on the nature of this campaign as well as action on the future research program of the Association will be taken at the semi-annual meeting to be held in the Hotel Washington, Washington, D. C., December 16 and 17, 1929.

The meeting to be held on the first day will be given over largely to problems of executive nature and a general discussion of means and ways of obtaining greater efficiency and economy in distribution.

The second day will be devoted primarily to meeting members of the various government bureaus and departments with which the members of the Association came in contact in the course of their daily activities.

A visit to the Food, Drug and Insecticide Administration, Department of Agriculture and to the Prohibition and Narcotic Divisions of the Treasury Department will occupy the forenoon of December 17th.

At the luncheon on this day, Senator George H. Moses, of New Hampshire, President pro-tempore of the United States Senate, will be the guest of honor and will address the members. The afternoon will be devoted to addresses by other government officials and reading and discussion of the reports of the Research Board and the Contact Committee of the Association.

Among the important topics to be discussed in the executive sessions are: Publicity, The Proposed Census of Dispensing Physicians, Institutional Advertising and the "Consult Your Family Physician" campaign.

DEXTRI-MALTOSE FOR MODIFYING LACTIC ACID MILK

Physicians who are partial to the use of lactic acid milk in infant feeding are finding Dextri-Maltose the carbohydrate of choice.

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Finally, Dextri-Maltose is never advertised to the public but only to the physician, to be prescribed by him according to the individual requirements of each baby.

THE JOURNAL

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Reprints of original articles will be supplied at actual cost, provided requests for them is attached to manuscripts or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive The Journal should call for immediate notification of the editor, Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

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EDITORIAL

THE LAW ON OSTEOPATHY AND CHIROPRACTIC

The Secretary-Editor rather frequently receives letters complaining that osteopaths and chiopractors are violating the law by prescribing drugs, or the letters request information as to the right of these cults to administer drugs. The activities and limitations of osteopaths and chiropractors are set out in detail in the Oklahoma statutes as well as the rights of physicians, pharmacists, food and drug venders and all others pertaining to public health matters; however, for the information of those who may not have opportunity, time or occasion to personally consult the statutes, we wish to quote abstracts from them: "Osteopathy, Oklahoma Statute, 1921, Chapter 79, Article 13, Section 8913:

"3. No osteopathic physician or osteopathic physician and surgeon shall use or prescribe any drug or chemical, *the nature and use of which is not taught in the curriculum of recognized colleges of osteopathy*, and the violation hereof shall be punishable as a misdemeanor under the general laws of this State."

The "nigger in the wood pile" in this mild reading clause lies in the words underscored. It is well known by inspectors who have closely investigated schools of osteopathy, that materia medica, therapeutics and the application of drugs is practically an unknown quantity in those schools. This same applies to laboratory work. It will be recalled that upon one inspection in certain supposedly high class osteopathic schools the laboratory paraphernalia was found unused and covered with dust. There was no evidence that it had ever been used. Nevertheless if these osteopaths have attended a school where some slim, specious claim is made that the administration of drugs is taught it would seem that there is no possible way to prevent them bungling along and possibly imperiling the lives of their clientele.

Oklahoma Statutes, 1921, Chapter 79, Article 12, Chiropractic. The writer is unable to find a single word in the chiropractic act permitting the chiropractors to administer any sort of drug, technically speaking, not even epsom salts or castor oil, if he prescribes it as a chiropractic practitioner. He might be permitted to charge and collect for the actual cost of the castor oil if such is prescribed, but it is doubtful if he would be permitted to go to court and sue for his fee upon the theory that there was professional knowledge and skill over and above the average attached, to the administration of the salts or oil. The statutes are eloquently silent upon their right to administer drugs. Inferentially the law only apparently intends that he shall practice those things which the following may fit him to practice and they are these:

"Chiropractic principles, anatomy, histology, physiology, symptomatology, orthopedia, chemistry, spinography, diagnosis, sanitation and hygiene, pathology, public health service and adjustology."

Now as a matter of fact the writer is of the opinion after consultation and discus-

sion with physicians, not only in Oklahoma but over may sections of the United States, that the practitioners of the medical profession are making a futile waste of time and accomplishing no good whatever by worrying about what little practice the disciples of these two cults are doing. There seems to be a general impression that most people should by this time be fairly well informed as to the limitations of their work and this is believed to be the true state.

Now one can hardly recall a case where a person is extremely ill which does not reach the hands of the regular practitioner. It is true that great damage and fatal results may ensue due to the delay, but the medical profession cannot be held accountable for the foolish foibles and eccentricities of a certain percent of the population. They are like sheep, they will follow any old alleged leader, regardless of worth or merit.

There seems also to be a general impression among thinking men, not necessarily physicians, that all men who profess to advise, heal, treat or undertake the care of ill people should first conform to the requirements of what is known as the Basic Science Law. This law, in substance, provides that all people charged with responsibility should first be qualified in certain basic sciences. It is believed that these qualifications are necessary before anyone, regular physicians, osteopaths, chiropractors or anyone else, is in position to undertake the problems confronting them.

IMPORTANT FACTORS IN UROLOGIC WORK

Since the advent of the cystoscopy, ureteral, catheterization, X-ray and fluoroscopy, no single phase of medicine has obtained such perfection as to diagnosis, and probably no branch of medical or surgical treatment has improved as much as urology.

This issue of the Journal is a rich one in its presentation of various urological phases. This editoral, however, would call especial attention to one element, which will always be ineradicable; this is the human element.

Urology being in the hands of physicians is naturally subject to the interpretations and misinterpretations the various physicians may place upon the case. Notwithstanding that urology may now be said to be the most exact, in so far as determining the nature of the trouble in advance, it is still the grievous experience of many physicians and surgeons to note that the general practitioner is not availing himself of the opportunity offered by modern diagnostic means as applied to urology. Fortunate indeed is the man who has a right ureteral or right kidney condition and escapes an appendectomy prior to the discovery of the real cause of his trouble. This is a true as well as a regretable indictment of too precipitate surgery. It is true that a certain few of these cases place the physician and surgeon in a trying position, and perhaps occasionally it is better to err on the wrong side and remove an appendix than to err on the wrong side and leave one which will destroy life. The symptoms of right kidney and ureteral trouble so closely simulate certain phases of appendicitis that the diagnosis of the latter and nonrecognition of the former will probably continue to occur for a long time.

There are many other problems of urology too numerous to mention, nevertheless they are too long overlooked by the attending physician, the physician who generally sees them first.

Blood in the urine demands investigation; it may mean little or nothing or an avoidable fatality. The main thing if the family physician is not certain, is to refer these cases to competent urologists where they may be properly worked out and the best system of treatment adopted. No phase of medicine requires such wide technical knowledge and such perfection of technique as does urology. That should always be borne in mind. Perhaps there is nothing so crippling as a nonrecognized prostatic condition or recurrent pyelitis, both of which are amenable to treatment, as a rule.

THE END OF THE YEAR

The editor takes this occasion to cordially thank the many men who have gone out of their way and given of their time and energy to assist in making his pathway easier, at the same time creating a larger and better Journal. We believe that our Journal has been better in the past twelve months than ever before. We hope to continue improving it but to do so we must have the continued assistance and contributions from the best men in the Oklahoma medical profession.

It gives us pleasure to state that our

financial affairs continue to be in good condition, that our editoral support is the highest class and slowly improving. In this connection we would again call the attention of our members to the fact that none but the elect may enter the advertising pages of the Journal, therefore, all things being equal our advertisers should have your support.

We take this occasion to extend best wishes and greetings of the season and sincerely hope that 1930 may prove to be a prosperous year for our members.

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Editorial Notes—Personal and General

DR. W. T. TILLY, former resident of Muskogee, has opened an office in Fayetteville, Arkansas.

DR. F. A. ANDERSON, Claremore, was reported suffering from cuts and bruises after an automobile accident which occurred November 29th.

DR. C. A. THOMPSON, Muskogee, attended the annual conference of State Secretaries and Editors, held in Chicago, November 15th and 16th.

DR. WALTER HARDY, Ardmore, has returned after a three weeks absence to Boston, Detroit and Chicago where he attended a number of medical conventions.

DR. W. W. HICKS has removed from Okmulgee, going first to the Mayo Foundation for post-graduate work in oto-laryngology and then to the State of Washington.

DR. FRANK H. McGREGOR, Mangum, was detailed for a month's service in the War College, Washington, D. C., in October-November. Dr. McGregor was one of two reserve officers detailed to such duty.

DR. LEONARD C. WILLIAMS, formerly of Osage, announces the opening of his office, 402-405 Osler Building, 1200 N. Walker Street, Oklahoma City, for the practice of Surgery, Gynecology and Diagnosis.

WOODS-ALFALFA Medical Societies held a joint meeting November 26th at Cherokee, entertaining with a banquet and general round-table discussion. Dr. Clyde Beson, State Health Commissioner, gave an address after the dinner.

DR. FRED S. WATSON, Okmulgee, has returend to his office in the Commerce Building, after two years spent at the Graduate School of Medicine, University of Pennsylvania, Pa. While there he earned the degree of Master of Medical Science.

Dr. G. C. Moore, formerly of the Pulaski County (Arkansas) Society, has applied for membership in the Okmulgee County Society. This was approved at the meeting of the Society on Monday, November 25th. Dr. Moore is connected with the Ming-Vernon-Stark Clinic.

DRS. A. D. YOUNG and W. K. WEST spoke before the Stephens County Medical Society in November. Dr. Young spoke on Chorea and Dr. West on the open treatment of fractures of the lower extremities. Drs. S. H. Williamson and Fred L. Patterson were hosts.

OKMULGEE-OKFUSKEE County Medical Societies were entertained by the profession of Okemah, Monday, November 25, 1929. Dr. E. P. Allen, Oklahoma City, associate professor obstetrics, State Medical School, presented a paper and two reels of movie film on "The Obstetric Pelvis."

OTTAWA MEDICAL SOCIETY elected the following officers for 1930 at the regular meeting Wednesday, December 4th: Drs. L. W. Trout, Afton, president; B. W. Ralston, Commerce, 1st vice-president; General Pinnell, Miami, 2nd vice-president; J. W. Craig, Miami, secretary; re-elected C. A. McLelland, Miami, censor.

JACKSON COUNTY MEDICAL SOCIETY opened their Fall meetings with a banquet October 25th. Drs. J. Z. Mraz and D. D. Paulus, of Oklahoma City were special guests and speakers of the evening. Abdominal troubles in connection with surgery or medical cases were the topics under discussion. About eighteen physicians attended.

HUGHES-SEMINOLE COUNTY Medical Society held a joint meeting with the Seminole City Medical Society on November 18th, in the Puritan Cafeteria, at Seminole. A wild duck supper was served after which the following program was given: "A General Talk on Diagnosis and Treatment of Endocrinopathies" with lantern slides, by Dr. Henry H. Turner, Oklahoma City. "Some phases of Gall Bladder Surgery," by Dr. J. M. Byrum, Shawnee. "Co-operation" by Dr. A. C. McFarling, Shawnee.

THE OKLAHOMA STATE HOSPITAL ASSOCIATION met in Tulsa, December 4th and 5th. The meeting was called to order by Dr. Frank H. McGregor, president, Mangum. An address of welcome was delivered by Dr. Fred S. Clinton, Tulsa. Among the physicians present, directly connected with hospitals, were: Doctors, L. E. Emanuel, Chickasha; B. H. Burnett, Duncan; T. M. Aderhold, El Reno; Russell C. Pigford, Tulsa; B. A. Collins, Claremore. Dr. Frank H. McGregor was re-elected president and Dr. A. J. Weedn, Duncan, secretary.

TULSA COUNTY physicians and surgeons availed themselves of the Extension Service of the University of Oklahoma, the course to run during November-December, and to cover Anatomy, Surgical Anatomy and the technique of special surgical work. The demonstrations in anatomy are in charge of Dr. J. C. Stephenson, head of the Anatomy Department of the State University. The class is reported as having been very enthusiastic in their work. Those availing themselves of the course are: Doctors H. S. Brown, J. C. Brodgen, P. N. Charbonnet, T. H. Davis, Hugh J. Evans, F. A. Glass, F. W. Henderson, J. W. Rogers, C. S. Summers, S. Murray, R. Q. Atchley, C. I. Johnson, A. Ray Wiley, L. N. Tucker, Ralph McGill, all of Tulsa; E. W. Reynolds, Bristow; J. H. Laws, Broken Arrow.

NEW HOSPITAL OPENS

The Polyclinic Hospital on Thirteenth Street near Robinson, Oklahoma City, has just been opened by Dr. Marvin E. Stout.

The hospital has a capacity of 75 beds. The building is fire proof throughout. The rooms with Simmons all steel furniture, in various colors. The beds are equipped with Beauty Rest mattresses, and are adjustable from all angles without interference with patients. The lighting system is all that could be desired. Every room is well lighted with lights that can be dimmed to suit patients' desire. There are small night lights close to the floor for nurses' convenience and no disturbance to patients. Telephone and radio phones in each room for patient's pleasure and convenience.

The floors are white and black. U. S. rubber tile, noiseless and resilient. The wards are large, light and airy, with beds as good as the best room in the hospital.

The operating room is modern in every respect. Built in sterilizing units, steam heated blanket warmers, doing away with the danger of hot water bottles. Adjoining the operating room is the chemical laboratory, X-ray room and cystoscopic room.

The atmosphere is pleasing and the prices are within reason.

DOCTOR NEWCOMB R. NOWLIN

Dr. N. R. Nowlin, 58 years old, Oklahoma City physician, died at his home, October 21, 1929, after a year's illness with cardiac asthma. He was born January 13, 1871.

Dr. Nowlin had lived in Oklahoma 35 years, 19 of which he had resided in Oklahoma City. He came to the state, settling in Eufaula, after his graduation from the University of Tennessee School of Medicine.

He was a member of the Masons, Odd Fellows, Knights of Phythias, the First Baptist Church and the State Medical Society.

Besides his widow, Dr. Nowlin is survived by a sister and two sons.

Burial was in Terril, Texas, former home of Mrs. Nowlin.

TUBERCULOSIS

Edited By

L. J. Moorman, M.D. and Floyd Moorman, M.D.
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An Evaluation of the Leucocytic Reaction in the Blood As Found in Cases of Tuberculosis. E. M. Medlar. American Review of Tuberculosis, Sept., 1929.

Since 1926, the author has studied 120 cases of tuberculosis doing weekly total and differential leucocyte counts. He knew nothing relative to the extent or type of tuberculosis as judged by the clinical findings and X-ray. The smears were stained with Wright's stain. Four hundred cells were counted in each smear.

The grouping of the cells in the differential count was that usually used—neutrophiles, eosinophiles, basophiles, lymphocytes (large and small), and mononuclears, transitional types and endothelial leucocytes.

After a diagnosis of tuberculosis has been established clinically, then the leucocytic reaction observed in the individual may be interpreted upon the pathogenesis of the disease. Unless the interpretation of the leucocytic reaction in the tuberculous is based wholly upon the pathology of the disease it is useless. If, however, one understands at what stage of the process the neutrophile, the mononuclear, leucocyte and the lymphocyte appear, and what happens as a result of their participation in the process, then one is able to interpret with surprising accuracy the status of the tuberculous process as a whole.

In the leucocytic reaction the mononuclear leucocyte represents new tubercle formation, the neutrophile represents tuberculous abscess formation and the lymphocyte indicates healing of the tuberculous process. The eosinophile and basophile appear to play no part in human tuberculosis.

It is the author's opinion that tuberculous individuals who maintain a septic leucocytic picture are apt to have hemorrhages, extensions, etc., at any time, so as long as such a leucocytic picture exists there is evidence that the tuberculous process is not healing, altho the clinical manifestations and the X-ray would suggest marked improvement.

The author also feels that individuals who show a high lymphocyte count, low neutrophiles and a slight increase of mononuclear leucocytes, do not have hemorrhages or serious spreads of their infection so long as they maintain such a leucocytic picture. This gives evidence that the tuberculous lesions are healing.

In the author's group of cases nine have died and twenty-two have had relapses, all of whom had a septic leucocyte count. None of the cases which have had a nonseptic leucocyte picture has had a clinical relapse.

Medlar has adopted the following rules. The septic picture requires the following: The total leucocyte count is above normal. In certain instances it may be normal or even below normal. The neutrophiles are always above 65 percent, usually 70 percent or more. The lymphocytes are never above 25 percent, usually below 20 percent. The mononuclears are usually above 8 percent, but may be as low as 5 percent. This type indicates that the main tuberculous process is undergoing abscess formation or an ulcerous condition is extending. Healing is not occurring. New tubercle formation is indicated if the nononuclears are above 9 percent.

The hyperplastc picture requires the following: The total leucocyte count is usually within normal limits, and is never greatly increased. The mononuclears are always above 10 percent, the neutrophiles below 60 percent, and the lymphocytes 25 percent or more. This indicates that new tubercles are being formed, but that those tubercles are not undergoing abscess formation. If the lymphocytes are above 30 percent it indicates that the process tends toward a healing stage.

For the best, or what one may designate as the nonseptic leucocytic picture, the following is required: The total counts must not exceed 10,000. The percentage of lymphocytes must be so high that it approaches closely the neutrophilic percentage. The mononuclears must not exceed 10 percent. Such a picture indicates that the main tuberculous process is healing, with very little evidence of new tubercle formation and not evidence of abscess formation.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M.D
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Malignant Bone Tumors. Vittorio Putti. Surg. Gynec. Osbtet., xlviii, 324, March, 1929.

It is the author's opinion that the problem of the skeleton, clinically considered, is first and foremost a problem of diagnosis. Early diagnosis is still the only certain way of ensuring a radical cure.

He believes the quotation of Murphy's still stands, that the diagnosis of sarcoma can and should be made by the history, and with the aid of skiagrams; he also believes that more than half the errors of diagnosis, and two-thirds of the delay in making a correct diagnosis, are due to inadequate attention to the history of the case, to incomplete examination of the patient, to delay in obtaining a skiagram, or the incorrect interpretation of it.

Trauma was a factor, which his histories revealed with great frequency as a cause of such tumors; forty-seven and sixteen one-hundredths percent of his cases showed this factor.

He accepts the premises of Segond, that isolated, direct trauma usually induced a tumor of the peripheral layers of bone with a short, latent period, whereas indirect trauma, open wounds, distortions, and fractures are causes of sarcomata with a long, latent period and a central situation.

In regard to symptoms, there are none specific. The peculiar quality of the pain should make one think of sarcoma. It is intense, dull, constant, and localized, but not accounted for by other local signs, however, in Ewing's tumor, there is an intermittent, spasmodic pain, associated with rise in temperature, suggestive of an inflammatory process.

In tumors of the pelvis and last lumbar vertebra, one may have pain which has all the characteristics of ordinary sciatica.

More important, in the author's opinion, than pain, is the location of the tumor. A tumor of the diaphysis is almost always an osteogenic sarcoma of periosteal type, or it is an endothelioma. A tumor of the metaphysis, if not benign, is sarcoma of central type; an epiphyseal tumor, in a great majority of cases, is a giant-cell tumor.

Tumors of the astragalus and os calcis are either giant-cell tumors or myxomata. A localized tumor of the vertebral column, unless it is secondary, is either an angioendothelioma or giant-cell tumor.

Many tumors, in the author's estimation, that are regarded as primary, are none other than isolated metastases of visceral neoplasms.

The X-rays in certain cases may alone suffice for the diagnosis, while in many others, it forms only one part of it. The author deplores the fact that X-rays are not taken early from seats of unexplained pain, although this may be often the first and only symptom of a sarcoma.

He believes that the biopsy should be done only by an expert pathologist, and states that in a great majority of cases, biopsy is inadequate, since bone tumor tissue is never homogeneous.

In regard to endothelioma, he calls attention to the mooted question as to whether it is a primary or secondary tumor. He is inclined to believe it is secondary, due to its extreme sensitiveness to the X-ray, for it is known that the metastases of a bone tumor have a similar sensitiveness. He calls attention to a more recent investigation by Professor Alessandra, which is daily gaining wider acceptance, that there exists carcinomatous and sarcomatous tumors of bone, which have originated from visceral blastomata, which cannot be diagnosed clinically, and proven by postmortem examinations.

As to treatment, he has used radium therapy in association with surgical treatment and has utilized it as the only method in dealing with inoperable tumors. It has great value for relief of pain, especially in diffuse sarcomata. He has noted rapid disappearance of soft sarcomata, and more especially endothelioma with a few doses, but the disappearance is only temporary.

In osteogenic sarcoma he has had some success with tumors of the fiberomatous type, but none with the periosteal, subperiosteal, or telangiectatic.

Giant-cell tumors he treats surgically, but he has observed relapses and occasional metastases. He is inclined to believe that Ewing's proposal, to treat them by radiation alone, is more logical.

His results of the treatment of bone sarcoma have been discouraging. His few successes represent cases treated with amputation or disarticulation.

The solution lies in more extensive research in the study of tumors and early recognition of the condition, and for one to have the courage of one's conviction, to advise early radical measures.

Primary Osteomyelitis or Tumor Metastasis. R. Feci. Radiol. Med., xiv, 768, September, 1927.

The author describes a case of bone metastasis from a benign tumor (papilloma) of the renal pelvis diagnosed at the operating table and also histologically. After some months the manifestations in the bones were the only evidences that could be verified clinically, which explains why, when the patient presented clinical symptoms of an inflammatory process, the diagnosis was long in error. A roentgenological examination of the lungs, before intervening on the skeleton, revealed the existence of numerous metastatic foci disseminated throughout the lung tree. Thus the nature of the bone lesion was established. The author concludes, stressing the importance that a roentgenological search may assume in the diagnosis in retrospect of the malignity of a tumor that by its clinical course, by the biopsy at operation, and by the histological examination, was held to be benign.

Contribution to the Study of Osgood-Schlatter Disease. T. Anardi. Chir. d. org. di movimento, xii, 187, March, 1928.

The author reports a case of detachment of the anterior tuberosity of the right tibia in a youth of eighteen years. He gives the clinical and roentgenological study of the case as well as the microscopic examination of the fragments removed from the surface of the detached piece in which was revealed an irregular ossification and a notable retardation of the processes of calcification and of formation of osteoid tissue. From the aggregate of the data collected, it seems to the auhor that he must classify the case reported under the clinical picture known under the name of Osgood-Schlatter disease.

Regarding the pathogenesis of the affection which is still much discussed, the author, on account of the manner in which the lesion is caused, on account of the structural changes and on account of the roentgenological appearance of the small sella turcica, holds that the disease must be attributed to an endocrine disurbance in general with special regard to those glands that more directly influence skeletal development in man, rather than to a traumatic or inflammatory factor.

The alterations or dysfunctions of these glands may be congenital and consecutive to disease in a majority of the cases of general type, therefore not a universal mechanism, though in most cases an endocrine disturbance.

Hallux Valgus. Merrill C. Mensor. California and West. Med., xxviii, 341, March, 1928.

The author has studied forty-one cases of hallux valgus in the orthopedic clinic of Stanford University, and has evidence to support the idea of congenital origin of this deformity. The most important finding is that a number of the patients showed a varus angulation of the first metatarsal and the children of some of these patients showed the same deformity. The cuneiform joint with the first metatarsal is set at an angle which sends the metatarsal off at a varus angle. The great toe then pushed over into a valgus angle by pressure of the shoe. In one case, this deformity extended through three generations.

Many patients have no symptoms until the fourth or fifth decade of their life when they begin to have pain. The pain and not the deformity brings the patient to a doctor. Usually the joint is arthritic which may explain the pain coming on later in life.

In treatment, it is best not to operate on such a joint if definite arthritis is present. For the cases with bad varus angulation of the metatarsal, an osteotomy should be done on this bone at its base, as advocated by Ewald, and the metatarsal straightened.

The Cause of Development of Hallux Valgus and a New Physiological Method of Operation. J. E. Hagen-Torn. J. souremennoi Chir., ii, 789, 1927.

Reviewing in detail the pathological anatomy of this defect, the author explains the fallibility of all the advocated operative procedure, which have no sufficient physiological bases and are not in accord with the laws of statics and dynamics of the foot. The etiological theories of hallux valgus are rehearsed. The author believes that the mechanism of production of this deformity rests upon the action of the adductor hallucis. This muscle becomes contracted. Adduction contracture—as a result of the combined influence upon the head of the first metatarsal of the adductor muscle which is in structure and function stronger than its antagonist, the abductor hallucis, and the narrow and pointed shoe with its weakening influence upon the same muscle, the abductor. The operation advocated consists in transplanting the abductor hallucis muscle from the attachment on the inner sesamoid to the head of the proximal phalanx. This will suffice to cure the hallux valgus in mild conditions. In more severe cases, the author adds to this operation a cuneiform resection of the metatarsal shaft. For one week the foot is kept immobilized in a starch bandage; then the patient wears an arch support for two weeks longer. Sixteen cases have been dealth with in this manner and in fifteen the results were excellent.

The Pathology of Osteo-Arthritis of the Hip Joint, as Seen at Operation. Marian A. Radeliffe-Taylor. Med. J. Australia, Supplement, October 29, 1927.

The paper considers mono-articular hip joint trouble, occurring in adults, with characteristic deformity of the head of the femur and characteristic symptomatology. Charcot's disease, syringomelia, the end results of acute infective arthritis and the like are included.

The symptoms included: (1) Pain in the hip joint, the inner side of the thigh, and the knee—the latter, at times, without pain in the hip; increased standing, walking or any sudden movement, especially thigh rotation; (2) Stiffness, very gradually increasing; (3) The limp of an adducted and flexed limb. There is always a lumbar lordosis and external rotation, adduction, and flexion of the thigh, with limitation of movement in all directions, and muscle wasting. Attempts at inward rotation are painful.

Radiographically there two types: (1) The head of a normal shape, but with a collar of new bone at the margin of the articular surface of the femur and to a lesser degree at the margin of the acetabulum; (2) Flattening of the femoral head like an umbrella, with the collar of osteophytes encroaching on the neck of the femur. In both there is increased density of the head and neck. This disease has been called malum coxae senilis, hypertrophic osteo-arthritis, degenerative arthritis, and arthritis deformans. It differs entirely from rheumatoid arthritis.

The author has studied the pathology of sixteen cases at operation. On incising the capsule, yellow fluid escaped, showing that the disease is not essentially a dry process. The synovial membrane over the anterior aspect of the femoral neck and lower portions of the acetabulum is of dusky red color, with a coarse, villous appearance, and is considerably proliferated. This is not true of the portion behind the femur. The cartilage over the posterior-superior weight-bearing surface of the head is usually worn away, having smooth eburnated bone. The remaining cartilage is dull yellow, turbid, nontranslucent, rough and fibrillated, with irregular bosses and depressions. The cartilage covering the marginal osteophytes is of normal appearance. The acetabular cartilage feels smooth. The osteophytes are of cancellous bone with compact surface and covered by normal cartilage. The

changes in the acetabulum are of like kind but less degree.

Of the sixteen operated cases, fourteen were relieved of pain. The imflamed synovial membrane is accumulated in such position as to be compressed by those movements which cause pain in clinical examination; and this compression, and not pressure of the osteophytes against each other, is probably the cause of symptomatic pain. (Operation consisted of removal of the synovial membrane and osteophytes). Limitation of movement is caused more by muscle spasm than by locking of osteophytes.

The changes are the opposite of those seen in rheumatoid arthritis where the synovial pannus grows over the cartilage, destroying it in spots; whereas in osteo-arthritis the proliferating bone encroaches upon the synovial membrane. The author feels that osteo-arthritis is due to long continued mechanical misuse of a joint; but that rheumatoid arthritis is infectious in origin.

DERMATOLOGY, X-RAY AND RADIUM THERAPY

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Chronic Serpiginous Pyodermia. A. Tischnenko and A. Kroiczik, Dermat. Ztschr. 52:11, Feb., 1928.

Twelve cases of this disease have appeared in the literature since Zurhelle and Klein first described it in 1926. Tischnenko and Kroiczik now report three new cases. One of the patients was a man and the other two, women. All were in a poor state of nutrition. The absence of typical tubercles, the distinct undermining of the margins of the ulcer without festoon formation, the typical purplish color and the margins, the absence of the Wassermann and Pirquet reactions (except in one case, in which there was a weakly positive Pirquet reaction) the healing with formation of a smooth, livid scar, and the culture of staphylococcus pyogenes aureus from the tissues left no doubt of the diagnosis, once this disease was thought of. The histologic picture was typical of granuloma, with destruction of elastic fibers, glands and follicles. The disease appears in two forms: the erosive and the ulcerous. These three cases belonged to the ulcerous form. This form may be subdivided into two varieties, according to whether the process begins in the follicles or perifollicular tissue or whether the micro-organisms penetrate the skin through skin lesions, there being no connection with the follicles. Exhaustion of the organism, with altered reactivity of the skin, possibly also reduced virulence on the part of the micro-organisms, explains why the disease appears as a chronic instead of an acute inflammation.

Second Infection in Syphilis; Its Relation to the Time of Treatment of the First Infection. Chas. R. L. Halley and Harry Wassermann, Arch. Int. Med. 41:843, June, 1928.

All cases of reinfection reported since the discovery of the causative agent are given a statistical and analytic study. Only 237 of the 676 cases reported are deemed acceptable by the authors. Of these, 97.8 percent of the patients had received treatment during the primary or secondary stage. Second infections occurred in 4 patients who had had syphilis in a latent form, and in one patient who presented undoubted evidence of congenital syphilis. There was not a single instance of a second infection in a patient who had previously had syphilis of either the central nervous system, or of the heart and aorta. The study indicates a close parallelism in man and in rabbits between the relation of the time of treatment of the first infection and the incidence of reinfections. The relative frequency of second infections in patients who had been treated early for the first occurrence as compared with the infrequency of second infections in patients who had not been treated early for the first attacks indicates that the time of treatment for the first infection has an important bearing on the patient's acquired resistance to a second attack. The authors point out that the relative infrequency of second infections, in patients whose treatment had been begun late in the course of the disease, is not in disharmony with the conception that acquired immunity to syphils may persist in the absence of syphilitic infection.

Poikilodermie-Civatte. E. G. Graham Little, Brit. J. Dermat., 40:231, June, 1928.

This article contains detailed reports of 9 cases of this condition in which the patients have come under the personal observation of the author since the two original cases reported by him in 1920. A short abstract of the 3 cases reported by Civatte in 1923 is also presented. The characteristics of Civatte's cases are discussed, in addition to reference to other cases reported by Civatte in 1906 as poikildermia vascularis atrophicans but classed by him later as a morbid type distinct from that of Jacobi. The condition presents the picture of a pigmentary disorder, in which mottling is the characteristic feature, potentially rapid in extension, accentuated on, if not restricted to, the face, and compatible with exceptional health, but apparently persisting indefinitely in the same positions.

A Contribution to the Histology of the Cylindromatous Tumors of the Scalp. J. H. Twiston Davies, Brit. J. Dermat. 40:241, June, 1928.

This article describes a case of a new growth of the skin imitating the structure of a sweat gland. The lesion occurred in the scalp of a girl, aged 18, and clinically resembled a granuloma pyogenicum. A detailed description of the histologic picture is presented with two photomicrographs. Reference is made to three cases described by Coenen in 1915, which the author discusses rather fully. Davies thinks that his case falls into the clinical category of hydro-adenoma cylindromatosum, as described by Coenen, in spite of the relative absence of cylindromatous formation in his case.

Studies of Calcium Metabolism in Certain Diseases of the Skin. N. Burgess, Brit. J. Dermat. 40:379, June, 1928.

This author carried out his work in an attempt to discover whether any abnormality of calcium metabolism, as shown by estimation of serum calcium, exists in those diseases of the skin in which the vegetative nervous system and the endocrine glands are believed to be primarily at fault.

The method of estimating serum calcium described by Laidlaw and Payne was used and the technique is outlined in the article. Numerous references in the literature are cited bearing on calcium metabolism in dermatology. Reference is made to the work of Vines and Grove, and the author states that the discovery of a normal figure for the total serum calcium in association with a diminished amount of precipitable calcium in many cases, and a diminution in both total and precipitable calcium in a few cases of certain diseases of the skin, confirms the work of these men. A marked diminution in precipitable calcium was noted in the vast majority of cases of urticaria, especially those with marked dermatographism, prurigo of the Besnier type, total alopecia areata, light sensitization of the adult type and eczema. Cases of acroasphyxia and erythema pernio can be divided into two groups—those with a greatly diminished precipitable calcium, and those in which the serum calcium is normal. Treatment with calcium and parathyroid was attended with considerable improvement in those cases of urticaria, prurigo, eczema, and acro-asphyxia and chilblains associated with a low serum calcium. Diminished precipitable serum calcium was noted in only one case of psoriasis. A lowered serum calcium was noted in two of five cases of seborrheic dermatitis, these cases being accompanied by much secondary infection. One case of erythema multiforme showed a slight diminution in serum calcium, while normal figures were noted in respective cases of Darier's disease and acrodermatitis continua. Of the cases investigated, those in which the endocrine glands and sympathetic nervous system are believed to be primarly at fault showed a diminution in the precipitable calcium in the serum, while in most cases the total calcium was normal. It is believed that the dysfunction of the endocrine glands leads to an alteration in the chemical or physical state of the calcium in the serum, so that there is a diminution in the amount of calcium which can be used by the tissues. This is believed to cause an increased irritability of the sympathetic nervous system which leads to the formation of skin lesions.

Acanthosis Nigricans. Mario Artom, Gior. ital. di dermat. e sifil., 69:184, April, 1928.

Two cases of this disease are reported by the author. The first case is that of a man, aged 63, who had suffered from the condition for fifteen years. The patient was a degenerate. After one year he developed abdominal symptoms, and a diagnosis of carcinoma of the stomach was made. The diagnosis was verified as necropsy. The second case was that of a woman, aged 31, in whom the disease began at the age of 10 years. The condition was not malignant in this case. The author thinks that acanthosis nigricans is connected with some disturbance of the normal development of the patient and does not believe that the cutaneous disorder is directly in relation with the presence of an abdominal cancer.

Treatment of Malignant Tumors. R. Minervini, Riforma med. 44: 622, May, 1928.

The author believes in the parasitic nature of cancer. He has experimented in men and in animals with numerous chemical compounds and has arrived at the conclusion that salts of antimony exert a marked beneficial influence in cases of cancer. He states, during the course of his experiments, that he has found that a combination of tartar emetic and extract of ipecac root gives the best results. He reports cases of all types of malignant tumors, including those of the skin, which have been apparently healed by intravenous injections of this combination. He thinks his treatment must be further tried before definite conclusions are drawn. The writer is a teacher of surgery at the University of Naples.

Unusual Reaction from Gold and Sodium Thiosulphate Injection in Treatment of Lupus Erythematosus. H. E. Alderson and S. C. Way, California & West. Med. 28:809, June, 1928.

These authors cite a case of lupus erythematosus in which three intravenous injections of gold and sodium thiosulphate, at five day intervals, were given. After the second injection there was noticeable improvement in the appearance of the process. There were no reactions of any kind until after the fourth dose, when a pale transitory erythema of the arms and neck was noted. A fifth injection was then given. Within twenty-four hours a severe reaction in the form of pyrexia (101 F.), angina and generalized erythema of the entire body with accentuation of the lupus erythematosus lesions took place. An intravenous injection of sodium thiosulphate (0.5 gm.) was then administered. The tourniquet was applied, not very tightly, around the arm just above the elbow. Within a few seconds a typical profuse purpura developed involving the entire skin from the tourniquet to the finger tips. The numerous lesions were from 2 to 4 mm. in diameter. There were no other symptoms. The purpura disappeared in about two weeks. The lupus erythematosus subsided completely, leaving only some pigmentation in its place.

EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.
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Otomastoiditis Due to the Pneumococcus Mucosus (Otomastoiditis a pneumococcus mucosus). Collet and Mayoux: Arch. Internat. de laryngol., 1929, xxxv, 331.

A patient thirty-six years of age was admitted to the hospital because of violent pains in the head developing in the course of acute otitis in the right ear. For eighteen days there had been a discharge from the right ear without pain or fever. There was no oedema or puffiness and no pain in the mastoid. Horizontal rotary nystagmus and signs of meningitis were present. The temperature was 39 degrees C., and the pulse 128. Lumbar puncture yeilded a thick liquid in which cytological examination revealed endothelial cells, lymphocytes, and polynuclears in a state of purulent degeneration and culture showed the presence of pneumococcus type 3.

At operation the mastoid was found very nearly entirely necrotic, but almost free from pus except in two large cells near the tip. Extensive curettage was done. The lateral sinus was blue and supple. Between the sinus and the osseous groove there was moderate venous haemorrhage. The dura was found normal. No extradural abscess was discovered.

Two days later the symptoms of meningitis were accentuated and there was retention of urine. On lumbar puncture the cerebrospinal fluid was found to be turbid. Death occurred on the following day.

In conclusion the author states that rapid extension of the osseous lesions, latency of the symptoms, and the frequent development of meningitis are characteristic of otomastoiditis caused by the pneumococcus mucosus.

The Present Status of Intranasal Operations for the Relief of Involvement of the Optic Nerve.

Fenton, R. A.: Arch. Otolaryngol., 1929, ix, 637.

The author believes there should be less hesitancy on the part of the ophthalmologists with regard to having the sphenoids and posterior ethmoids opened in cases of optic neuritis and retrobulbar neuritis. He does not ignore causes of optic nerve involvement other than sinus infection—indeed, he emphasizes them—but he thinks the skepticism concerning the value of intranasal surgery which is voiced so repeatedly by prominent ophthalmologists is due largely to the over-enthusiasm and lack of skill of some rhinologists. He discusses the brutality of certain operative procedures and then describes some of the more recent and less deforming methods. In discussing the findings in the sinuses he quotes several European and American pathologists who state that an acrid serous discharge is present much more frequently than pus. In the diagnosis of sinus infection the X-ray is seldom of aid.

Otomicroscopy on the Living Subject (Otomicroscopic sur le vivant). Luscher, E.: Arch. internat. de laryngol., 1929, xxxv, 302.

Luscher has made certain improvements in the otomicroscope recently described by him which simplify its use. With this instrument, which requires no cooperation on the part of the patient, a magnification of from ten to fifty diameters may be obtained with ordinary light. The examination is binocular, and two persons can view the enlarged image at the same time. Measurements may be made in three dimensions. Atrophy and perforation of the tympanum are differentiated without difficulty. Moreover, inspection of the edges of a perforation will show whether the lesion is old or recent, a matter of importance in establishing its relation to trauma. Small haemorrhages due to trauma may also be detected and are found much more frequently than is suggested by macroscopic examination or inspection with the lens.

When the otomicroscope is used with Siegle's speculum it is possible to determine with exactitude the state of tension and mobility of the tympanum as a whole and in its several parts. A vast field of research from the points of view of otological morphology and function has been opened up by details now for the first time made visible. One of the most interesting problems is the blood circulation in the tympanic membrane and the middle ear. The pressure in the smallest vessels can be measured with precision.

A number of images as they appear with the otomicroscope are reproduced in the article. Unfortunately, photography is not possible with the instrument. The otomicroscope is recommended especially for teaching, for clinical examinations in which precision is essential, and for investigative work.

The Technique of the Use of Radium in Malignant Diseases of the Upper Air and Food Passages. Wright, A. J.: J. Laryngol. & Otol., 1929, xliv, 365.

As the use of radium in the treatment of malignant diseases of the upper air and food passages presents special problems, the author is trying to evolve a satisfactory technique for each anatomical region.

In the treatment of nasopharyngeal epitheliomate he embeds radium needles in a cast of the nasopharynx and fixes the cast in place by silk threads brought out through the nasal passages. In the pharynx, radium is embedded or attached to a dental plate. In the treatment of laryngeal growths, radium needles are buried after the thyroid and cricoid cartilages have been split and the laryngeal cavity has been opened. In cases of retrocricoid growths, the thyroid, cricoid, and upper rings of the trachea are split, a submucous removal of the posterior plate of the cricoid is done, and radium is placed in the cavity thus formed. In the treatment of lesions of the oesophagus, radium is placed around a Souttar tube which is then covered by a second rubber tube and left in place to allow feeding.

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